THIS WEEK'S National Petroleum NEWS

Coming Meetings

American Petroleum Institute, Central Group on Automotive Transportation, Adolphus Hotel, Dallas, Tex., April 27, 28.

Indiana Petroleum Association, Severn Hotel, Indianapolis, Ind., May 6, 7.

American Gas Association, Natural Gas Department, Memphis, Tenn., May 11 to 14.

American Oil Chemists Society, New Orleans, La., May 14, 15.

Natural Gasoline Association of America, Mayo Hotel, Tulsa, May 19, 20, 21.

Fire and Safety Marshals, National Petroleum Association, Warren, Pa., May 28.

American Petroleum Institute, Division of Production, Baker Hotel, Dallas, Tex., June 3, 4.

American Society of Mechanical Engineers, National Oil & Gas Power meeting, Madison, Wis., June 15 to 18.

American Society for Testing Materials, Chicago, June 22 to 26.

American Institute of Mining and Metallurgical Engineers, Petroleum Division, Houston, Tex., Oct. 2, 3.

American Petroleum Institute, annual meeting, Stevens Hotel, Chicago, Nov. 10 to 12.

Third International Conference on Bituminous Coal, at Carnegie Institute of Technology, Schenley Park, Pittsburgh, Pa., Nov. 16 to 21.

Geological Society of America, Mayo Hotel, Tulsa, Dec. 28 to 31.

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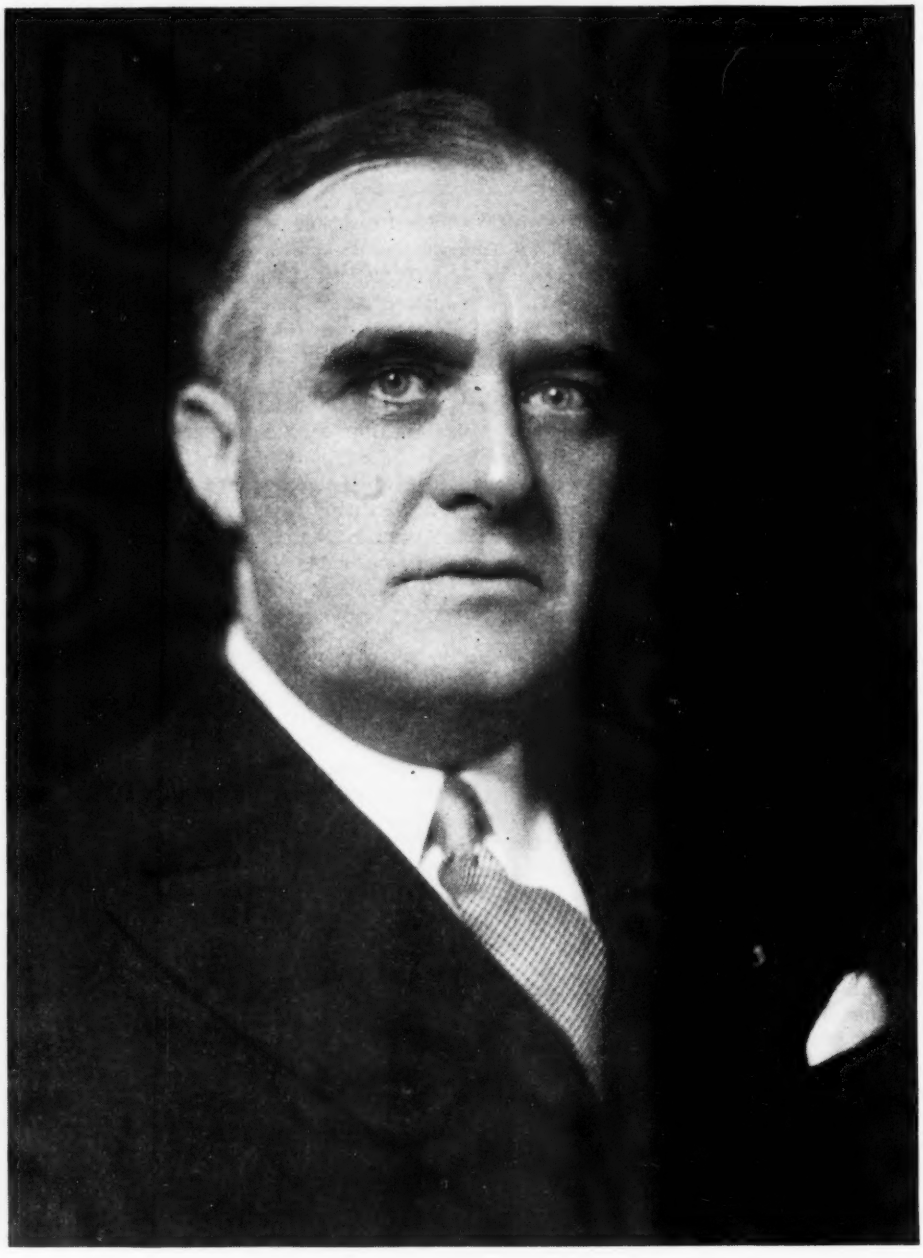

THIRTY-EIGHT years' apprenticeship in Standard Oil service is the background J. C. Hilton brings to his new position as president of the Standard Oil Co. of Louisiana. He succeeds Dan R. Weller, who is resigning because of ill health, but will continue as chairman of the board of directors.

Mr. Hilton steps into his new task from the office of purchasing agent of the Standard Oil Co. of New Jersey. He was in charge of meeting fuel oil requirements of the navy during the war.

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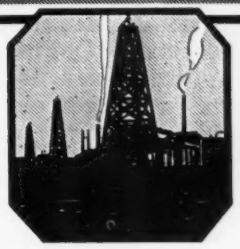

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Vol. 23 **CLEVELAND, April 22, 1931** **No. 16**

East Texas to Go Under Proration As Humble Posts Crude Prices

By Paul Wagner
N. P. N. STAFF WRITER

By Telegraph

HOUSTON, April 21

SABINE Uplift fields of East Texas are to go under proration.

With salt water dictating cautious operations prorationists and anti-prorationists have agreed to a 60-day truce in the legal battle against restricted production. The Texas Railroad Commission is issuing a new proration order which is expected to be followed at least for a trial period.

Meanwhile Humble Oil & Refining Co. has helped the cause of those campaigning for proration by posting the Mid-Continent price schedule for East Texas crude. The new schedule is to become effective when proration is put in force.

R. D. Parker, chief supervisor of the oil and gas division of the Texas Railroad Commission, announced this morning that the commission would issue its new proration order late April 21 or April 22.

It is understood that allowable production for the district will be 130,000 barrels daily May 1, stepping up to 140,000 barrels May 15, to 145,000 barrels June 1, and 150,000 barrels June 15.

Instead of three field committees in charge of proration as previously planned one committee of 11 is expected to be appointed as an advisory group under the chairmanship of Charles F. Roeser of Fort Worth.

Contending forces in the proration fight are understood to have reached their agreement for a truce "to stabilize the oil market in East Texas" at a meeting at Austin last night. It is understood that the Carl Estes injunction suit will be held in abeyance for at least 60 days.

Prior to the agreement it was understood that some 15 to 20 small producers had planned to seek injunction similar to that obtained by Estes in case the railroad commission should determine to enforce proration.

Forced to the conclusion that East Texas crude will control the price for all competitive oils, President W. S. Farish of the Humble Oil & Refining Co., issued a statement in connection with revised schedules effective Tuesday morning, April 21, saying that older fields cannot continue without adjustment in delivered cost at seaboard to a basis proportionate with crude originating in the new Sabine uplift region.

President Farish also announced that the subsidiary, Humble Pipe Line Co., is reducing its tariff and delivery costs by approximately 20 per cent in the parent Humble Oil & Refining Co.'s attempt to equalize all crude at seaboard.

President Farish issued the following announcement: "At the request of those in charge of the meeting at Tyler on January 15, 1931, the Humble Oil & Refining Co. there made a statement in which it expressed the hope that those interested in the new East Texas oil field would reap the greatest benefit from the oil resources in that territory and the belief that such benefits would be received under some system of orderly and conservative production. It announced its purpose to enter and serve the field as a purchaser and transporter of crude in the event orderly production should be established in such a way as to make such service by it physically possible.

"The Railroad Commission of Texas has attempted to provide a method of orderly production for East Texas. We feel that orderly production will be beneficial to the district and that the best interests of both producers and royalty owners in the East Texas oil field will be served by the carrying out of any commission order for orderly production. This company reiterates its purpose of co-operating with the constituted authorities in their conservation efforts in this territory.

"Assuming that the proper organization and machinery for the establishment and maintenance of orderly production including actual allocation of allowable amounts of production will be promptly set up with subsequent adjustments that will give East Texas a fair participation in the market, we hereby announce that we will purchase oil in the district ratably in accordance with allowable production percentages established by the railroad commission and its agents, and until further notice we will pay for such oil the prices shown in the attached schedule.

"Acting under such assumptions, we are proceeding to install gathering facilities to enable us to make connections to the properties of our customers and to start making purchases as soon as the commission's order is actually effective. Pending definite determination of our allowable production by the commission or its agents and in order to facilitate the working out of this program, we are restricting the production from our own wells to that necessary to fulfill our lease obligations and protect our properties against offset production.

"The East Texas field appears to be the largest oil field that we have ever had in the United States and several times the size of any other Texas field. It apparently will cover approximately 100,000 acres of land highly productive of oil. The major part of our Texas oil is marketed at tide water. This field is nearer tide water than the majority of Texas oil fields.

"The oil is as good or perhaps slightly better quality than the average Mid-Continent or Texas crude of similar gravity. The considerable quantities moving to market have already effected product prices. All these facts force the conclusion that the price of East Texas oil will control the price of all competitive oils.

"Low rail and pipeline rates are in effect for the movement of this oil to the Gulf, where the major part of it will naturally and economically find its market. Other crudes sold in the same market must sell at prices which make their delivered cost proportionate to the delivered cost of East Texas oil.

"The discovery of this tremendous field has brought new problems before the industry, affecting not only the production and sale of crude and products, but transportation as well. Obviously numerous adjustments are necessary as a consequence of so important a development. The Humble Oil & Refining Co. recognizes that the sale of crude from older existing fields cannot continue without adjustment in the delivered cost of such crudes to a basis proportionate to East Texas.

"In an effort to effect some of these adjustments which are essential to the maintenance of the movement of oil from other districts, and to help producers in other fields to mee the burden of competition of East Texas Oil, Humble Pipe Line Co. is proceeding to reduce its tariffs affecting practically its entire system in connection with which our total delivery charges on crude oil will be reduced approximately 20 per cent, effective as early as the interstate schedules can be made to apply.

"The attached crude price schedule effective today reflects the attempt of the Humble Oil & Refining Co., considering the confused conditions existing in present markets, to equalize prices of crudes in other fields in Texas with the existing Mid-Continent price being posted for East Texas crude and is based on the revised pipeline rates above referred to. This should make easier the marketing of oil from other areas in competition with East Texas, and will aid the railroad commission in its effort to increase the taking of oil from these areas.

"The maintenance of the purchasing policy here announced for East Texas and the maintenance of the attached price schedule posted for all areas in the state, are depended upon better production values and upon the success of the Railroad Commission in the enforcement of its conservation program throughout the state."

Prior to the Humble's action asking prices for East Texas crude were higher. Rumors of distress sales at 8.5 to 17 cents per barrel continued but could not be confirmed. The asking price appeared to be directly proportional to the financial responsibility of the seller.

Million barrel contracts were said to have been obtainable at 50 cents per barrel as compared with 40 cents before salt water appeared at Kilgore.

Production from the area now approximates 250,000 barrels from about 240 wells, not including week-end completions.

Texas Crude Cuts

ON April 21 Humble Oil & Refining Co. reduced crude in all Texas fields in amounts ranging from 5 to 20 cents. Average amount of cut was 10 cents per barrel.

It posted prices for the first time for East Texas crude.

Price cuts in the following Texas fields were:

Ranger, North Texas, Moran and Cooke counties, 10 cents.

Panhandle, 10 cents.

West Texas, 5 to 7.5 cents.

South and southwest Texas, 7 to 20 cents.

Gulf Coast, 9 to 20 cents.

Prices unchanged in Mexia, Powell, Boggy Creek, Richland, Wortham and Currie fields. Prices in the new Sabine uplift region of East Texas are same as those for Mexia, Powell, etc., and same as Stanolind's prices on Mid-Continent crude.

The Editors' Viewpoint

An Ignorant Man

By Lawrence E. Smith

N. P. N. STAFF WRITER

WHEN Sen. William E. Borah last week appeared in the role of protector of the consumer of oil products he showed at the outset that he had made but a superficial examination of his subject. He began by denouncing the attempt to set up a program of production restriction, seeing in it only a method of despoiling the public. As a telling bit of evidence of a nefarious plot, he said, according to the Tulsa World:

"So far as the plans have been made public, there seems to be no purpose in any program yet presented to protect the users of oil and its products. The state umpire of Oklahoma is quoted as testifying before the state commission, 'we leave the consumer out. We do not take him into consideration. That part doesn't enter into it at all.'"

The senator quite obviously has been supplied with pamphlets or newspaper advertisements gotten out by those who tried, unsuccessfully, to get the Oklahoma legislature to repeal the proration law. The misquotation occurred in such advertising and pamphleteering and it is a consolidation of a question by a lawyer and the answer by Umpire Collins, who was commanded to give a "yes or no" reply.

The hearing occurred last October. A record was being set up which would give proration all the worst of it. Mr. Collins was asked various trick questions by several lawyers. He was kept on there a long time to tell just how the estimates of market demand were arrived at each quarterly period, these being the basis for the petitions for proration orders which the corporation commission makes. Near the close of his testimony, a lawyer, H. G. McKeever, questioned him as follows:

Q. . . . . Now, Mr. Collins, the question I asked you was: In making these prorations up so they may be recommended to the Commission, have you umpires or the committee assisting you ever taken into consideration the consumers of the refined products?

A. What we take into consideration is the demand of all the refiners, purchasing companies, and the producers themselves; royalty owners and all.

Q. Why do you still leave the consumer out, or the hoi polloi, the people. I am asking you if you take that into consideration and you can answer it yes or no. Will you do that?

A. No, sir, we do not.

Q. How is that?

A. We have never taken—that part doesn't enter into it at all.

Mr. McKeever: That is all I wanted to find out. That is all.

As Mr. Collins had explained earlier, he is employed and is designated by the State Corporation Commission as the agent for the commission to see that proration is administered fairly as between producers. With the finding of markets for the state he has nothing to do. That is the task of the producing companies. And the consumer doesn't buy crude oil, so how is he to be "considered?"

Mr. Collins, being a forthright man, told the attorney that he was doing what he was paid to do. He might have struck a dramatic pose, after the manner of a man running for office, and said that the consumer was dear to his heart and that he was hell-bent all the while on protecting him. That would have been as empty as is the assertion of Senator Borah that he is going to stand between the consumer and the oil companies who would restrict production.

THE senator erred in taking a jumbled version of the corporation commission's record. He could have examined it for himself, instead of relying upon the misquotation that was circulated over the country and thrust before the legislature. The umpire was put into the attitude, and Senator Borah took it all on faith, of brazenly asserting that the consumer figured not at all in the plotting of a group of oil companies.

So much for the senator's disposition to perform like a senator usually does—accept any assertion that is made and repeat it as fact. He went farther, in his public remarks, and said that the only effect of the fall of the price of crude oil on gasoline was to raise the price.

There is no use in trying, in these columns, to controvert that piece of moonshine. Every oil man reader knows better. The writer has, on this date, mailed to the senator a list of service station prices at representative points in the United States, with comparison as of a year ago. It is hoped that he will get his sights adjusted on this matter.

If ever the consumer needed no protection from the oil companies it is today. As a matter of fact, he has never needed protection. In the industry's more than 70 years history, it has

ever given a good account of itself. Why sue out an injunction before the defendant gives evidence of intention to commit a crime?

Quoting from the letter to Senator Borah, which accompanied the gasoline price record:

"The problem of the oil industry may be described in a broad way as one of avoidance of waste. The leaders of the industry lay no claim to the role of altruists—they ask not for canonization. They are business men trying to conserve their capital resources and to discharge their obligations to the public, which is a condition precedent to the discharge of their duty to the stockholders.

"In effecting the conservation of capital, the broader conservation of oil and gas resources, upon which subject we have had so many lectures from the federal government, is necessarily brought about. What we waste we lose and what we save we sell. Basically, that is the reason for proration. . . . there is in the storing of oil a great loss of capital. The foundry today earnestly seeks to avoid these physical and capital losses and the only way in which such result can be achieved is by keeping the oil in the reservoir where nature placed it."

Senator Borah patently has become exercised over the wrong thing. He should be as concerned about overproduction of oil as he has been about farm products. The industry has been trying, with the help of some state governments, to keep its output within reasonable bounds and that is the very thing the federal people and this present administration have attempted to do for the farmer, except that they went farther and bought the farm surplus of certain commodities, thereby defeating the stabilization program.

As a lawyer, the senator doubtless was trained to discard hearsay evidence and to find the facts. His long service in that most gossipy of places, the U. S. Senate, has led him into careless ways. He is cordially invited to devote a few days to getting the facts on the oil business before he dons armor and takes up the sword again in defense of the "plain people."—L. E. S.

2214-Bbl. Average Shown By Lathrop Wells

By Telegraph

HOUSTON, April 20.—Twenty-eight producing wells in the Lathrop area of Gregg County gauged through 11/16 inch choker on tubing with casing closed showed a potential production of 62,012 barrels, a per well averaging exceeding 2214 barrels. This area of the general Sabine Uplift producing region is the least developed in the new East Texas territory and gives an index to best field conditions to be found there from a conservation standpoint.

Of the 28 wells gauged by umpires representing the railroad commission nine had been shut in for lack of storage, and no available pipeline connections. Five have been connected up within the last few days leaving four still unconnected. Some of the wells without pipeline connections are offset by others exploited at rates as high as 10,000 barrels daily.

No Lathrop area wells have shown water, but they do have high temperatures, some as high as 143 degrees. Reservoir pressures have dropped from 500 pounds to 300 and 250 pounds and pressures are still dropping.

Operators believe that if present producing methods continue 60 days longer the Lathrop area will have to resort to pumping wells or installation of air gas lift equipment with possible early water encroachment will ensue.

Without proration as a deterring influence to water encroachment and constantly lowering reservoir pressures it is believed in similar quarters that still more serious conditions will develop in the more extensively drilled Kilgore and Joiner areas.

Oklahoma City Allowable Increased 40,000 Bbls.

By Telegraph

TULSA, April 21.—The corporation commission of Oklahoma, Monday issued an order increasing the allowable flow of Oklahoma City field 40,000 barrels over the rest of April and 50,000 barrels over May. April allowable is 165,000 and May 175,000 barrels per day.

The new allowable for April is 7 per cent on a potential of 2,240,640 barrels to come from wells neither over or under previous allowable and a balance of 8155 barrels daily from wells underproduced.

In May the allowable on even produced wells is 6 per cent on a potential of 2,549,489 barrels or 152,970 barrels per day with the remainder to come from under-produced wells. The action was taken following a hearing on petition by Umpire Bradford and assertions by principal purchasers that seasonal requirements are greater.

Fix Kettleman Hills Gas-Oil Ratios

LOS ANGELES, April 17.—The Superior Court at Hanford, Cal., has granted a preliminary injunction to restrain the waste of natural gas in the North Dome, Kettleman Hills.

After a deliberation of several months, during which two wells were completed in the area with gas-oil ratios of less than 2000 cubic feet of gas per barrel of oil, the court fixed an allowable ratio of 10,000 to one. In effect, this nullifies the power of the gas conservation law to control crude oil production in this area.

The Kettleman North Dome Association will be made a party to the injunction, which was issued against individual operating companies. Preparations are now under way to kill and deepen six wells on the North Dome,—two belonging to the Association,—that have extremely high gas-oil ratios. The restraining order is effective May 1.

Additional provisions of the injunction provide that operators shall not place a well on production until outlets are available. Operators must also install Christmas trees capable of sustaining a pressure of 5000 pounds to the square inch.

Water in East Texas Wells Brings Need for Operating Caution

HOUSTON, April 17

SALT water delimitation of the Sabine Uplift producing region on the west[1] will influence operating caution near the danger line of encroachment and will materially scale down optimistic estimates of final recoveries.

The general district may have to be reckoned with in production averages of 200,000 to 215,000 barrels daily for some time to come, but the temper of development may be expected to change rapidly.

Ultimate yield figures of the most optimistic observers are already being scaled down to levels in keeping with NATIONAL PETROLEUM NEWS estimates of one billion, four hundred forty million barrels[2] from upwards of 96,000 acres averaging approximately 15,000 barrels an acre. Optimists had previously estimated final recoveries of two and a half billion barrels from more than 150,000 acres.

Salt water encroachments on the Florey wells, Peter Holmes survey, of the Magnolia Petroleum Co., and the Burton Drilling Syndicates, will not be the last; either in the Kilgore area or the general district.

Twenty-odd other wells in the Kilgore area have been drilled to Woodbine levels within 10 feet of the water found in the Magnolia-Florey at 3658 feet, revised datum, surface elevation 330 feet, or 3328 feet below sea level.

The Magnolia well has now been pinched to 75 barrels daily, producing 25 per cent salt water with the oil. Burton Drilling Syndicate's offset, which did not show brine until after the Magnolia-Florey, is believed to have been inaccurately logged because of crooked hole. The well record shows the Burton-Florey total depth 3710 feet, surface elevation 354 feet, or subsea level 3356 feet.

Sharper dips occur in the strata in the Kilgore division of the general district than in the north (Lathrop) or south (Joiner) areas; thereby accounting for greater widths of productive area without salt water encroachment to date.

Data provided by western wells in the general district indicate, however, that the shore line producing territory may no longer be considered much wider than five miles average without courting salt water encroachment.

The Snavely well of Selby Oil & Gas Co., south of Gladewater, the westernmost completion in Gregg county, spread the Lathrop area to a width upwards of six miles along a structural nose in the northern part of the general district.

If the water level west of the Snavely may be assumed to compare with that in the Kilgore area then the Snavely, completed at 3299 feet subsea level, 3572 feet total depth, is 29 feet above the danger mark shown by the Magnolia-Florey.

IN THE Joiner area, where the Guy V. Lewis No. 1 Cook well extended production westerly into Smith county, a similarly assumed danger level would be 40 feet below the Lewis-Cooke completion depth. The well was drilled to 3698 feet, surface elevation 420 feet, subsea level 3278 feet.

It should be recalled, however, that only in the Kilgore area is the water encroachment level known definitely; and that variations in structural dip may influence the Joiner and Lathrop water intrusions variably when they appear.

Influenced by distress prices for crude, which in some instances have dropped below 20 cents a barrel at the well, antiprorationists are proving more amenable to state curtailment orders and the East Texas situation appears better.

Relatively high production levels may be expected to continue, however, at the expense of daily averages in other Texas and Mid-Continent crude oil producing areas.

WELLS now good for 5000, 8000 and even 10,000 to 15,000 barrels, open flow capacity daily, may be considered capable of producing 125 barrels pumping average at the end of a year under unrestricted withdrawals, or materially greater quantities of crude under inferred success of proration.

It is unlikely, therefore, that Sabine Uplift region production will be less than 200,000 barrels daily a year hence; and, depending on economic conditions and market demand affecting the territory, it may be closer to 300,000 barrels.

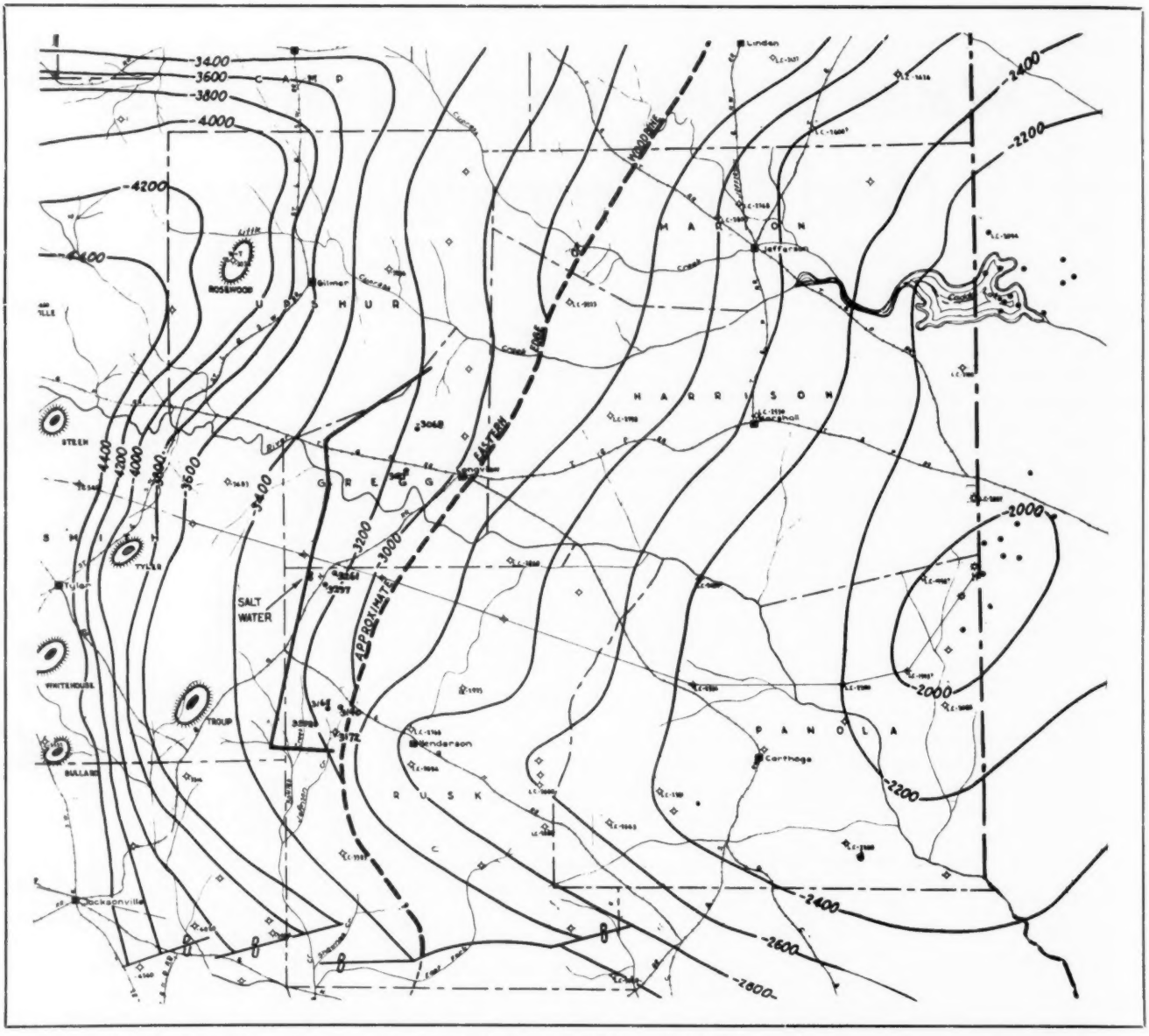
Under proration, which is now expected to become effective May 1 there will be a larger number of wells drilled —though crude withdrawals will be lower—than without curb.

The presence of water back of the Woodbine pay acts as a delimiting influence more in its confining of the productive area to narrower field limits than otherwise. Its flushing influence, under conservative operating practice, will aid maximum oil recoveries from the sand, but this in contingent on equitable withdrawals permitting gradual rise of the water table and the avoidance of "coning" or channeling in the pay horizon.

It becomes more necessary than ever, therefore, to inaugurate protective measures that

[1]NATIONAL PETROLEUM NEWS, page 25, April 15, 1931.

[2]NATIONAL PETROLEUM NEWS, page 27, April 15, 1931.



The "straight-edge" outline shown on the map between the 3200 and 3400-foot minus contours of the Woodbine sand marks the approximate western line of oil production in the Gregg, Rusk and Smith county areas of the Sabine Uplift region; the eastern edge of the Woodbine delimits the district on the east. The map shows part of the terrritory covered in project 25-B of the American Petroleum Institute in co-operation with the Texas Bureau of Economic Geology. Contours in Woodbine area are drawn on top of the sand east of the Woodbine area on top of the Lower Cretaceous; contour interval 200 feet, datum is mean sea level. Small black dots represent original oil wells in the Lathrop (Gregg) county area, at the north; Kilgore area, in center; Joiner area, at south. Usual conventional symbols show dry holes. D/U represent downthrow and upthrow sides of structural faulting. Arrow points to area of first salt water encroachment in Kilgore area

will offset damaging influences on the sands, conserve field pressures and distribute them properly in the interest of good production practice. That some degree of underground waste is inevitable under conditions of East Texas early development is conceded, but careful handling of the territory under proration will minimize that effect after state orders become effective.

Division of the producing region into prorating units, probably of 20 acres each, will result in the drilling of at least one well to each of the units. This will mean going ahead with approximately 5000 wells for the approximately 100,000 acres of estimated productive ground, at drilling and equipment costs of nearly $25,000 each, or the expenditure of $125,000,000 for this phase of development alone.

Without proration, owners of the larger blocks would protect lease boundaries but drill fewer "inside" locations, thereby cutting development costs but making heavier withdrawals of crude from fewer wells in their operations.

Two companies, namely the Humble Oil & Refining Co., and the Gulf Production Co., are conservatively estimated to own leaseholds on more than 40 per cent of the acreage to be found productive in the general district. The 20 largest leaseholders in the district are shown by compilations of land holdings to approximate control of 70 per cent of the inferred producing area.

Enough small properties are in the hands of operators willing to sacrifice their leases for relatively short, quick profits, however, that the East Texas problem cannot be solved overnight.

Gasoline Demand Will Not Exceed 1930, Refiners Told at St. Louis

By J. C. Chatfield

N. P. N. STAFF WRITER

ST. LOUIS, April 16

TOTAL gasoline demand from U. S. refineries in the six months from April 1 will be almost identical with demand in the same period last year.

Domestic demand will increase moderately the last half of the period. Export demand will be substantially lower than last year.

Such were the conclusions reported to the refining division of the American Petroleum institute by two separate committees, one the Volunteer Committee on Economics of the Federal Oil Conservation Board, the other the Statistical Sub-committee of the Institute.

As was the case at the general meeting of the institute last November, when two similar reports were presented covering the period from Oct. 1 to April 1, the reports were offered for the individual guidance of refinery executives in order that gasoline stocks of the counties may not be built up to a burdensome point.

A resolution adopted by institute directors requested the industry "to bear in mind the expressions of these two surveys relative to gasoline stocks in order that individual members of the industry may conduct their operations with the benefit of that information."

In submitting the report of its committee on economics, Secretary of the Interior Wilbur, chairman of the Federal Oil Conservation Board, wrote the institute:

"It is the opinion of this board that this report is a conservative survey of national petroleum conditions and that the suggestion advanced and the estimates of probable consumption and needed requirements for the period April 1 to Sept. 30 should form the basis for constructive discussion and action by the petroleum industry generally."

The oil board committee, through its chairman, E. B. Swanson, chief economist of the Bureau of Mines, estimated total gasoline demand for the six months at 252,000,000 barrels. The institute sub-committee estimated total demand at 252,127,000,000 barrels.

Crude oil demand on U. S. producers was estimated by the oil board committee at 2,521,497 barrels daily average during the period. The institute committee placed domestic crude requirements at 2,568,100 barrels per day.

While the refining division of the institute was in session here April 15 and 16, the Oil States Advisory Committee appointed by governors of the oil producing states also met at St. Louis to study the reports of the two committees, for the purpose of making recommendations on oil proration levels to the governors and conservation commissions of the various states.

THIS committee agreed unanimously on a recommendation to the various states that present daily allowable production under proration be continued throughout the period without change.

If the committee recommendations are followed, domestic production would be held to 2,199,000 barrels daily average. This would permit withdrawal of more than 300,000 barrels of oil per day from storage.

Cicero I. Murray, of Oklahoma, chairman of the oil states committee, addressed the general meeting of the refining division of the institute, outlining the history of the activities of his committee and stating its policy.. He began by saying that it was apparent to Governor "Alfalfa Bill" Murray, of Oklahoma, that oil men could not agree on a program after the governor had appointed a committee of oil men to make a survey and report to him. He characterized the oil men's recommendations as a "Wickersham report."

Realizing that the efforts of one state at conservation might easily be set at naught by unrestrained production in another state Governor Murray decided to organize his interstate advisory committee.

THE committee chairman closed his remarks with a declaration of policy. The committee, he said, will do for the oil industry what it cannot do for itself. The committee will limit drilling to what is necessary, it will foster and insist on unitization of small leaseholds, it will limit production to a point where excessive above-ground crude stocks can be liquidated and buyers forced to pay the intrinsic value of crude they purchase, it will save the output of small wells for posterity and conserve the taxable assets of the various states.

T. C. Grimm, representative of Governor George White, of Ohio, read the recommendations of the committee to the institute. He said:

"Our committee is of the unanimous opinion, and on motion agreed, that no sufficient reasons or inducement has been shown in the reports of either of the committees to justify our states in making any increases in oil allowable production during the said six months period (April 1 to Oct. 1,) and that it will be for the best interests of all our states, represented, and we so recommend to our governors and to the various conservation authorities of these respective states, that there be no

Consolidated Statement of Estimated Gasoline Production, Shipments and Resultant Stocks, as Made by the Statistical Sub-committee of the American Petroleum Institute, in Its Report to the Refining Division of the Institute, Meeting in St. Louis, April 15 and 16

(Based on assumption that 27,184,000 barrels is adequate stocks on Oct. 1, 1931. Figures in thousands of barrels)

	East Coast	Appalachian	Indiana Illinois Kentucky	Oklahoma Kansas Missouri	Inland Texas	North La.-Ark.	Texas Gulf	Louisiana Gulf	Rocky Mountain	*California	Total United States
Estimated Stocks Apr. 1, 1931..	8,650	2,050	5,500	4,000	1,400	175	6,225	1,900	2,000	*16,100	48,000
April 1931:											
Production	5,637	1,277	5,572	5,422	2,291	803	6,206	1,820	1,280	4,954	35,262
Shipments	5,708	1,421	5,689	5,462	2,324	808	6,378	1,910	1,339	5,896	36,935
Closing Stocks	8,579	1,906	5,383	3,960	1,367	170	6,053	1,810	1,941	15,158	46,327
May 1931:											
Production	5,901	1,341	5,939	5,634	2,318	799	6,067	1,998	1,377	5,684	37,058
Shipments	6,383	1,503	6,171	5,793	2,418	805	6,548	2,153	1,437	6,406	39,617
Closing Stocks	8,097	1,744	5,151	3,801	1,267	164	5,572	1,655	1,881	14,436	43,768
June 1931:											
Production	5,879	1,293	6,012	5,698	2,238	788	6,465	1,729	1,286	5,847	37,235
Shipments	6,943	1,465	6,223	5,959	2,413	795	7,177	1,899	1,351	6,937	41,162
Closing Stocks	7,033	1,572	4,940	3,540	1,092	157	4,860	1,485	1,816	13,346	39,841
July 1931:											
Production	5,836	1,287	6,441	5,943	2,365	853	6,048	1,875	1,338	6,215	38,201
Shipments	7,113	1,516	6,862	6,712	2,508	861	6,665	2,114	1,526	7,631	43,508
Closing Stocks	5,756	1,343	4,519	2,771	949	149	4,243	1,246	1,628	11,930	34,534
August 1931:											
Production	6,231	1,256	6,540	5,957	2,640	799	6,518	1,961	1,404	5,812	39,118
Shipments	6,907	1,613	6,950	6,664	2,740	807	6,960	2,069	1,749	7,300	43,759
Closing Stocks	5,080	986	4,109	2,064	849	141	3,801	1,138	1,283	10,442	29,893
September 1931:											
Production	6,058	1,287	6,045	5,741	2,591	853	6,594	1,674	1,298	5,296	37,437
Shipments	6,442	1,385	6,229	5,891	2,622	859	6,894	1,697	1,408	6,719	40,146
Closing Stocks	4,696	888	3,925	1,914	818	135	3,501	1,115	1,173	9,019	27,184
Total 6 Months:											
Production	35,542	7,741	36,549	34,395	14,443	4,895	37,898	11,057	7,983	33,808	224,311
Shipments	39,496	8,903	38,124	36,481	15,025	4,935	40,622	11,842	8,810	40,889	245,127
Closing Stocks	4,696	888	3,925	1,914	818	135	3,501	1,115	1,173	9,019	27,184

*California gasoline stocks include total inventory of gasoline and engine distillate at refineries, water terminals, all sales distributing stations in continental U. S. and products in transit thereto.

increase of allowables of production of crude oil within such period of time, beyond the present allowables established in those states where there are proration or conservation orders or actual production of those other states now producing oil and not having proration or conservation regulations.

"It is the unanimous opinion of this committee that such program will best promote conservation of the natural resources of our states and will best prevent waste, preserve taxable values and do those other things which are for the direct benefit of our states; and that, if the actual needs of the petroleum industry during this period shall exceed the actual production hereby recommended, as indicated by both reports hereinabove mentioned, then it will be to the best interest of all concerned for additional needs for crude oil to be filled out of the present excessive amounts of oil held in storage in the United States; or if the owners of such stored oil do not desire to so use said stored oil, then that sufficient inducements should be held out to the various states interested to justify this committee in recommending increase in production to meet such demand."

Following are the recommend allowables by states as included in the report of the oil states' committee:

	Barrels per day
Texas	714,000
*Oklahoma	550,000
Kansas	110,000
California	500,000
Arkansas	50,000
Louisiana	65,000
New Mexico	40,000
Eastern States	110,000
Rocky Mountain States	50,000
Total	2,199,000

*Contemplates an increase in the Oklahoma City allowable from 125,000 to 150,000 barrels per day if market demand for this oil is adequately shown.

The committee called particular attention to the fact that U. S. production was up to 2,250,000 barrels last week because of East Texas and urged prompt action in curbing the excess there.

John D. Gill, of the Atlantic Refining Co., Philadelphia, chairman of the institute statistical sub-committee, prefaced his report with a review of the predictions made last November at the annual A.P.I. meeting and a comparison of these predictions with what has taken place in the period covered.

In only one factor was the committee far from what the industry experienced, he said. That was in export demand. The committee forecast an expert demand of 32,600,000 barrels, while, the industry enjoyed a demand of only 26,200,000 barrels. Instead of an increase of 0.4 per cent a decrease of 19 per cent was realized.

Last November the committee estimated a domestic gasoline demand of 175,400,000 barrels in the six months. Actual demand was 174,100,000 barrels.

The committee suggested a new supply of gasoline for the period from Oct. 1 to April 1 of 209,800,000 barrels. Refiners actually produced 209,100,000 barrels. It was suggested that straight run gasoline output be 99,800,000 barrels. Actually it was 99,500,000 barrels.

Demand for domestic crude oil has not varied more than 30,000 barrels daily average from the 2,233,000-barrel estimate of the committee. Crude oil consumption by refineries was some 12,000,000 barrels greater than estimated due to an increase in demand for fuel oil of roughly 12,300,000 barrels.

Mr. Gill pointed out that, in normal times, it is reasonably

easy to predict demand for gasoline with a great degree of accuracy. It is in such times as at present that there is a greater chance for error, he said.

Results of errors in forecasts of demand may be minimized, he said, if stocks are taken as a goal rather than production. In the six months just closed refiners produced almost exactly as much gasoline as the committee had recommended. But the demand error resulting from cessation of foreign buying caused stocks on April 1 to exceed the committee recommendations by 8,000,000 barrels.

Both the statistical sub-committee of the institute and the institute committee on Refinery Statistics and Economics called attention of the industry to the fact that, if monthly stock levels are kept in line with the schedule of recommendations, then any errors in demand estimates will have no effect. Such a policy of operations of course requires that refinery executives keep their fingers continuously on the pulse of demand. It requires a more flexible operating program, one that may be changed from week to week or month to month as the stock level may dictate.

As it did last November the institute committee set up recommendations as to what it believes reasonable stocks of gasoline in each refining district should be at the close of each month during the coming six months. The stocks were scaled down month by month, with the end in view of reaching a normal working stock figure by October 1, the close of the season of peak demand. This would permit the industry to enter the season of low demand with no surplus.

The oil board committee contented itself with setting up stock recommendations for the country as a whole. For Oct. 1 it suggested that a reasonable working stock of gasoline would be 30,600,000 barrels, a reduction of 17,400,000 barrels over the summer.

The institute committee suggested an October 1 total gasoline stock figure of 27,184,000 barrels, a cut of 20,816,000 barrels.

Detailed figures showing the institute committee's stock and output recommendations and forecast of demand are shown in Table 1. The complete report of the oil board's committee was published in the April 15 issue of NATIONAL PETROLEUM NEWS.

The institute committee did not foresee any difficulty in meeting gas and fuel oil demand east of the Rocky Mountains if the schedule is followed. A total demand of 142,000,000 barrels of this product was forecast for the six months, as compared with 137,265,000 barrels last year. Production and imports including intercoastal shipments were estimated to be large enough to cause a stock increase of 9,666,000 barrels as compared with an increase of 7,546,000 barrels in the same months last year.

In view of the growing demand for anti-knock fuels the institute committee was of the opinion there should be a substantial increase in the output of cracked gasoline and a decrease in both straight run and natural gasoline components of the motor fuel supply. Following is the committee's idea of the composition of the output of U. S. refineries for the period April 1 to Oct. 1, compared with what took place last year:

	(Thousands of Barrels) 6 Months 1930	6 Months 1931
Natural gasoline	21,921	21,000
Cracked Gasoline....	84,485	88,461
Straight Run	116,925	114,850
Total	223,331	224,311

The increase in cracked gasoline output suggested by the committee of course has its effect on the demand for domestic crude. Following is the institute committee's schedule of crude supply and demand for the six months, 1931 compared with 1930:

	(Barrels per Day) 6 Months 1930	6 Months 1931
Demand		
Runs to Stills....	2,615,900	2,565,300
Exports	70,800	73,800
Used as Such....	87,800	92,900
Total Demand....	2,774,500	2,732,000
Supply		
Imports	181,800	163,900
Total Demand for U. S. Crude	2,592,700	2,568,100

The committee forecast indicates that crude to be run to stills during the period will almost coincide with demand for U. S. crude. This is because imports are to be reduced to a point where they will nearly balance with exports and crude used as such. Crude runs to stills are suggested by the committee at a level about 50,000 barrels below last year, due to the smaller amount of straight-run gasoline needed.

R. C. Holmes, of The Texas Co., vice president of the institute for refining, acted as chairman of the meeting where the reports were discussed. He expressed pleasure at the accomplishments of the industry in the period just closed and indicated a hopeful attitude for the future.

Directors of the institute meeting the following day adopted resolutions thanking the various committees that worked and asking individuals in the industry to study the reports as a guide to their company operations.

Atlantic Plans Gasoline Lines in Pennsylvania

PHILADELPHIA, April 18.—Keystone Pipe Line Co. has been incorporated in Pennsylvania to build a gasoline pipeline to Harrisburg and Scranton, Pa., from the Atlantic's refinery at Point Breeze. Later this line will be extended into New York state where Atlantic is marketing gasoline and oils.

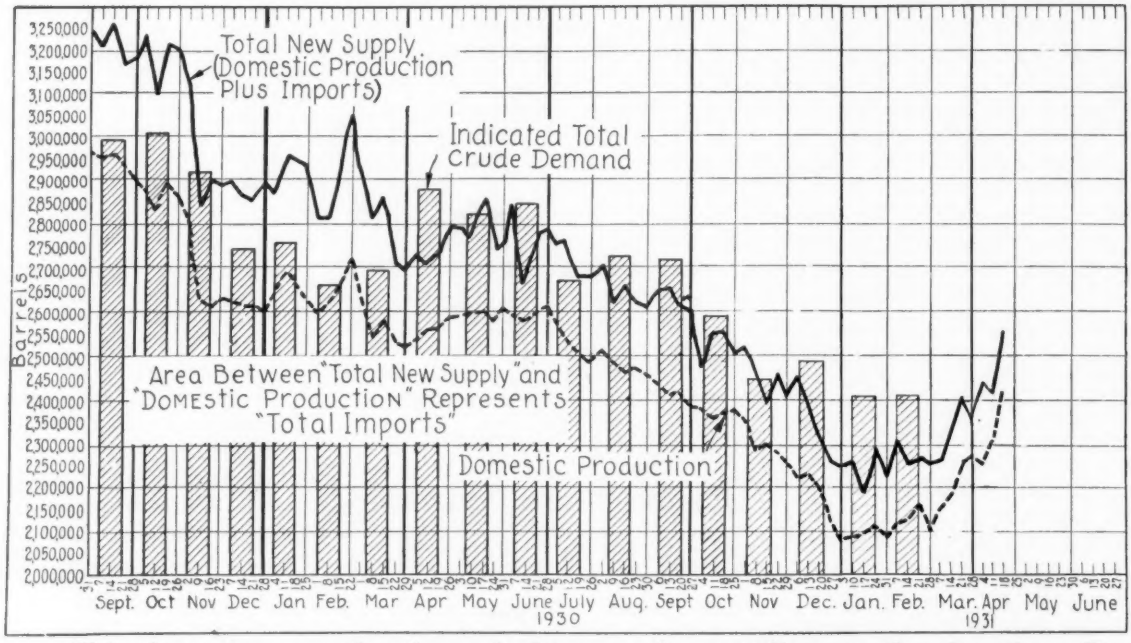
It also is proposed at a later time to build gasoline line from Point Breeze to Pittsburgh and Franklin, Pa., where Atlantic has refineries.

The authorized capital of the pipeline company is $100,000. J. W. Van Dyke, chairman of Atlantic, is president; W. M. Irish, president of Atlantic, vice-president, and R. C. Tuttle, manager of marine transportation of Atlantic, is treasurer.

Construction of the line to Scranton will begin soon, it is said.

Atlantic Refining Co., Inc., of New York has increased its capital stock from $500,000 to $2,500,000. This is a wholly owned subsidiary of Atlantic Refining Co. of Pennsylvania. Purpose of the increase is to reimburse the company for expenditures already made in acquiring marketing properties in New York state and for future acquisitions, it was stated in the certificate filed with New York state.

Review of Late Production News



This chart shows crude oil supply from week according to the American Petroleum Institute reports (solid line) in relation to indicated crude oil demand as taken from the Bureau of Mines monthly reports (shaded columns).

THE highest production since December was reached the week ended April 18 when U. S. daily average output went to 2,422,000 barrels, a gain of 113,750 barrels over the week ended April 11, according to the American Petroleum Institute.

Crude oil imports were at the rate of 140,000 barrels daily, a gain of 37,000 barrels over the previous week. Total new crude supply was 2,561,145 barrels, compared with 2,410,000 barrels the week ended April 11.

California

AN OPEN hole test in the San Joaquin Valley the past week featured California production news. It extended the productive limits of the Lost Hills pool slightly more than a mile to the southeast of Belridge Oil Co.'s discovery well of the high gravity oil horizon.

In making this test, Union Oil Co. bottomed its Belridge No. 17 in Sec. 36,27-20 at 5541 feet with the shut-off at about 5340 feet. Although the project flowed at a rate of about 500 barrels of 40 gravity oil per day it was later killed to deepen in hopes of picking up a stronger gas pressure. This is the only well to be completed in this pool since its discovery.

Current production in this country by pools is found on page 73.

Nearly a year ago the Belridge No. 15 was completed for an initial production of approximately 2500 barrels, which has since increased to about 4725 barrels daily.

Texas, New Mexico, Louisiana

SABINE Uplift region production in East Texas set a new high mark, April 15, when 223 wells gave up 248,388 barrels, divided as follows: Longview, area, 25 wells, 38,180 barrels; Kilgore area, 69 wells, 148,123 barrels; Joiner area, 129 wells, 62,085 barrels.

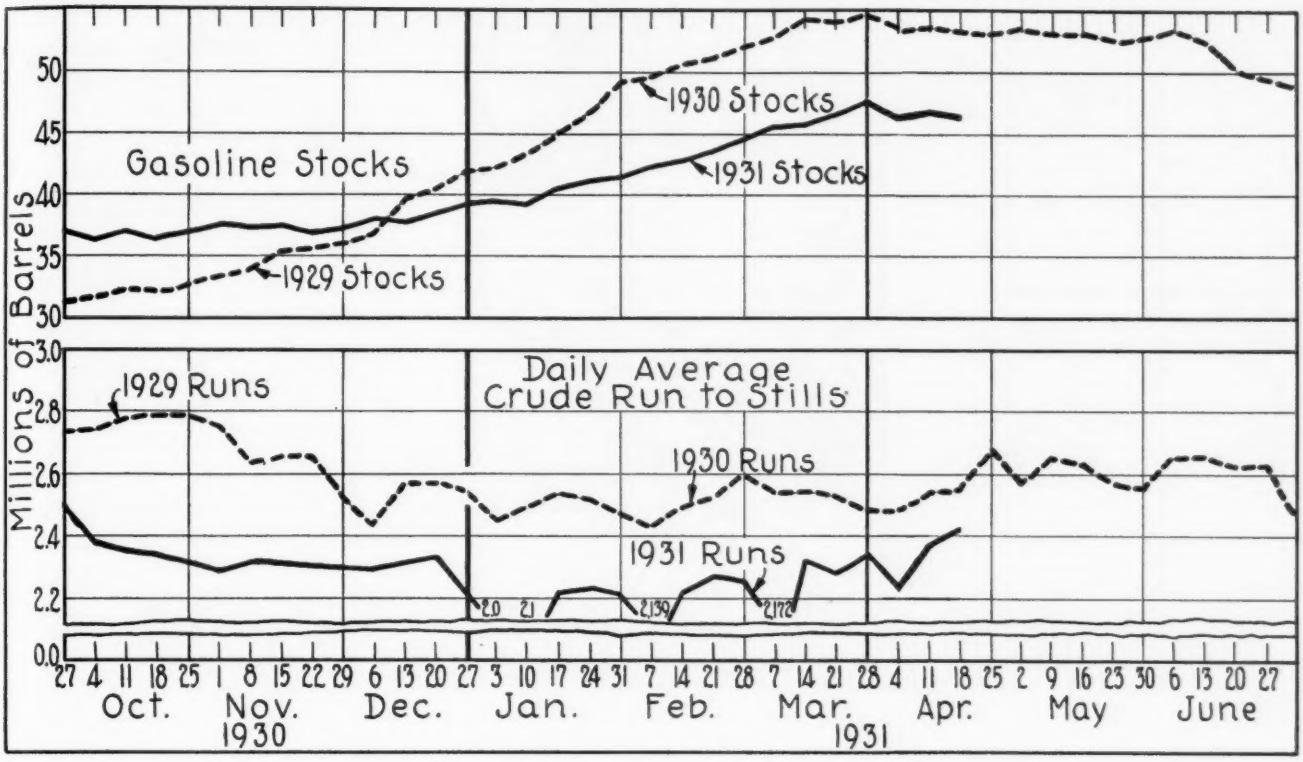
Average prices for crude in the district approximate 30 cents a barrel, loaded on tank cars, netting the producer 22½ to 25 cents at the well. Although some sales have been made at 19 and 20 cents a barrel, reports of lower prices remain unconfirmed.

Oklahoma, Kansas

OF CHIEF interest to the Mid-Continent the past week was the hearing conducted by the Oklahoma corporation commission on allowable production for the state. Purchasing companies indicated that a greater output for the Oklahoma City field was in line with prospects for increase in demand and the commission ordered an increase of 40,000 barrels daily.

Due to the testing of wells on four-hour open flow to ascertain the potential production, the Oklahoma City field has for several days past produced considerably more than the allowable of 125,000 barrels daily. It reached its all time peak on April 14-15 when 285,360 barrels came from 102 wells of the 734 in the field.

U. S. Crude Runs and Gasoline Stocks as Reported Weekly by A. P. I.



Gasoline Stocks Reduced 373,000 Barrels

By Telegraph
NEW YORK, April 21

STOCKS of gasoline at refineries reporting weekly to the American Petroleum Institute were cut 373,000 barrels in the week ended April 18. Total stocks at the close of the week were 46,384,000 barrels. This compares with stocks of 46,076,000 barrels on April 4.

The cut in stocks was made in the face of an increase of 62,900 barrels in daily crude runs to stills, indicating a substantial increase in demand. Reporting refiners operated at 68.2 per cent of capacity during the week as compared with 66.4 per cent the previous week.

Demand at Atlantic Coast refineries appeared to be particularly good. Refiners in that district increased their crude runs to stills 31,900 barrels daily average and yet were able to reduce their gasoline inventories 382,000 barrels.

Texas Gulf Coast refiners increased their crude runs 18,600 barrels daily average and drew 109,000 barrels from gasoline storage.

California refiners drew 140,000 barrels of gasoline from stocks, but cut their crude runs 23,600 barrels daily average to 53.1 per cent of capacity.

Inland refining groups except the Appalachian generally added to their gasoline stocks during the week.

Current Refinery Operations

Districts	Per Cent Capacity Reporting	Daily Average Crude to Stills Week Ended		Per Cent of Reporting Capacity Operated Week Ended		Stocks (Thousands of Barrels) Gasoline		Gas & Fuel Oil		Cracked % of Total Capacity Reporting	Gasoline Production Daily Av. Production (Barrels) Week Ended	
		April 18	April 11	April 18	April 11	April 18	April 11	April 18	April 11	April 18	April 18	April 11
East Coast	100.0	454,900	423,000	74.2	69.0	8,793	9,175	7,733	7,706	90.3	86,600	89,400
Appalachian	93.8	82,100	87,300	62.0	65.9	1,861	1,897	1,216	1,184	94.6	18,400	18,900
Ind., Ill., Ky	97.5	336,900	299,400	88.4	78.6	6,128	6,067	3,310	3,173	95.2	84,700	82,700
Okla., Kans., Mo	89.4	276,000	267,400	67.0	64.9	3,601	3,533	3,823	3,748	87.4	50,700	50,000
Texas	91.9	614,700	599,900	82.7	80.7	7,933	8,101	8,839	8,840	95.9	121,100	126,300
La., Ark	98.3	140,100	142,900	53.5	54.5	2,118	1,957	2,332	2,343	97.7	36,100	29,600
Rocky Mountain	93.1	58,400	56,700	41.8	40.6	1,986	1,923	810	832	100.0	18,900	14,900
California	98.8	471,000	494,600	53.1	55.7	13,964	14,104	98,772	99,012	100.0	50,600	42,400
Total	95.7	2,434,100	2,371,200	68.2	66.4	46,384	46,757	126,835	126,838	94.5	467,100	4,54200
Texas (Gulf Coast)	100.0	474,000	455,400	89.5	86.0	6,824	6,933	6,482	6,509	98.5	99,400	105,100
La. (Gulf Coast)	100.0	81,100	87,600	59.7	59.4	1,949	1,782	1,304	1,325	100.0	25,700	21,600

Three Killed When Treater Bursts

WICHITA FALLS, April 18.—An explosion and fire at the cracking plant of the Panhandle Refining Co. here the morning of April 16 resulted in the death of three refinery workers, the injury of two others, and damage of approximately $30,000 to the plant's equipment.

R. K. Krull, C. R. Walker and J. A. Horne, trapped in the receiving room under a gasoline treating tower which burst, received burns resulting in their deaths. O. B. Males, plant superintendent, and Lawrence Worthem, operator's assistant, were slightly injured.

According to other refinery workers, Krull sacrificed his own life by remaining in the receiving house to shut the oil supply valves, and thereby prevented what probably would have been a more disastrous fire.

The explosion tore away the top of the treating tower and scattered the oil and blazing Fuller's earth over a large portion of the plant. An investigation was being conducted April 18 to determine the cause, but no results have been announced.

Sterling Heads Texas Conservation Group

HOUSTON, April 17.—After electing Governor Sterling as chairman of the Texas Oil Conservation Committee, April 16, the organization members called a conference for Austin, May 4, of representatives of Oklahoma, Kansas, Arkansas, California, Louisiana and Wyoming.

Governors, chairmen of oil commissions and presiding officers of legislatures will be invited to attend. The conference has as its object the adoption of uniform oil codes and co-operation with regard to handling the industry's problems.

Chairman C. V. Terrell of the Railroad Commission of Texas was made vice chairman of the Texas Oil Conservation Committee and Representative A. M. Howsley of Albany its secretary.

Leo C. McCloskey

McCloskey Is Director Of Imperial Oil

TORONTO—Leo C. McCloskey, assistant general manager of refineries for Imperial Oil, Ltd., of Canada recently was appointed a director of that company.

Mr. McCloskey is a native of Ontario. He joined the company in 1903. After several years as cooper clerk, general timekeeper, and other positions in the works, he was placed in charge of records of costs and processing.

In 1915, before the expansion of the company with the building of five new refineries in Canada, he became chief accountant. He moved to Toronto in 1916 when the company's general offices were moved there from Sarnia, Ontario.

He retained this position until 1923, when he was appointed assistant general refinery manager.

Gulf Plans Big Terminal For Cleveland

CLEVELAND, April 18.—Gulf Refining Co. has obtained permit in Cleveland to build a lake terminal with 23 tanks with capacities ranging from 146,000 to 3,360,000 gallons. The cost will be $180,000. Later the company will build a warehouse and office building here. It is estimated total expenditures in the plant will total $1,000,000.

Gasoline and other products will be shipped by water from the Gulf's new refinery at Toledo, O.

Code Continues Pending F.T.C. Decision

CLEVELAND, April 16.—The Federal Trade Commission is permitting the code of practices for the marketing of petroleum products to remain effective pending its decision on the plea that the present code be retained by the commission. A hearing on the plea was held in Washington March 31.

The commission rejected the oil code in an order issued Feb. 3 but later suspended its rejection for 60 days.

Paul E. Hadlick, secretary of the marketing division of the A. P. I., has notified state code committees that code work may be carried on as in the past until he advises them differently.

Five Dead, Two Others Burned in Oil Fire

HOUSTON, April 20.—Three were dead, including Claude Upchurch, part owner in the Brightwell lease, near Kilgore, as a result of an East Texas oil well fire, April 17. Upchurch died in a Tyler hospital the next day, after J. W. Smith, pipeline worker, had succumbed to burns. Another pipeline worker, R. C. Holcomb, also died.

Two others were in a serious condition, including L. H. Gray, vice president of the Sabine Pipe Line Co.; and E. T. Greene, tank builder.

Fire caught at the No. 2 Brightwell completion of Allen & Upchurch when gas escaped from a connection being made by a fitting crew. It collected close to the ground and drifted to a boiler about 150 feet away, where it was ignited.

In another fire near Kilgore, Joe Lamb and M. H. Pettaway, succumbed to burns resulting from gas igniting from backfire of an automobile on a lease of the Humble Oil & Refining Co.

$75,000,000 MARKET in Special Servicing is Here with Spring

By Roger B. Stafford

N P. N. STAFF WRITER

By Ewing Galloway, N. Y.

Six lines of traffic on Fifth Ave.

SPRING is in the south and it is moving rapidly into the northern states. That means more motoring, as every sunny week-end proves. It means more gasoline sales and should mean a big increase in the sales of every other commodity and service oil marketers have to offer.

It is time to drain the winter gear oils from transmissions and differentials in the south and some motorists are beginning to think of summer gear oils in the north. A merchandising campaign on transmission and differential lubricants will greatly stimulate sales of these heavy oils—and profits.

The biggest profits will go to the best merchandisers.

Competition will be keener than a year ago for three reasons:

1. There are more service stations this year equipped to give complete lubrication service and one-stop service than a year ago.

2. There are 78,000 fewer passenger cars in operation than a year ago, according to registration figures compiled by the U. S. Bureau of Public Roads.

3. The business depression, unemployment, and short time employment is forcing more car owners to think of "getting by" with the lubricant they have in their cars.

But a good big market remains. To the active marketers will go the business.

Gross sales on this spring motor and gear oil business should exceed $50,000,000. This is a conservative estimate based on an average of five quarts of motor oil and four pints of gear lubricant per car. Chassis lubrication should add another $15,000,000 to $20,000,000 to the total possible sales. Another $4,000,000 or $5,000,000 might be added by making special drives to clean the winter's grime from springs and oil them with special spring oils.

To operators of one-stop stations spring marks the beginning of the year's best tire season. The tire replacement market is estimated for 1931 at around 40,000,000 casings. This is almost 1.8 casings per registered automobile. The owner of a 1929 model car should be good for the purchase of a complete set of tires. Some of the 1930 model owners will be in the market. Owners of 1928 and earlier models should provide a market for one or more casings per car.

The one-stop stations may give cars a spring polish, dress the tops and rubber floorboard mats, and wax the linoleum mats. Engine and chassis may be cleaned with kerosine or distillate. Upholstery may be cleaned with naphtha. All this, when priced fairly, should attract thousands of car owners and yield the station owner a good profit.

Radiators may be drained of their anti-freeze solutions, the cooling system cleaned with a scale and sludge remover, and leaks sealed with liquid solder.

Most brakes, unless the car is new, need relining in spring. Good brakes mean safety and with higher speed driving in summer, every motorist should be impressed with the fact that his own safety and that of other persons may depend on his brakes.

Winter is severe on batteries and a check of these vital parts of cars should result in a great many sales, even though winter is the best battery season. Lights should be checked over and dim ones replaced. The station operator may build goodwill by seeing that light connections are tight. Frequently dim lights, blinking lights, and refusals to burn are due to loose connections.

For good performance the car needs clean sparkplugs, in good condition. As each car takes four to 16 plugs there is a good market for this automotive necessity.

Many of these services can be offered in combination with other services. Combination rates may be set to attract customers. Combination rates, particularly of the more common services, may attract many car owners who, because of business conditions, had figured they could not afford to have all the things done at the usual rates.

It is possible for each oil marketer to campaign for this spring business at not too high a cost. Many marketing companies already have mailing lists of the car owners in their territories. If they do not have

Passenger Car and Total Motor Vehicle Registrations in 1930 Compared with 1929 Registrations

(Figures from U. S. Bureau of Public Roads)

	1930 Passenger Cars*	1929 Passenger Cars*	Number Change 1930 From 1929	Per Cent of Change 1930 from 1929	1930 Total Motor Vehicles	1929 Total Motor Vehicles	Number Change 1930 from 1929	Per Cent of Change 1930 from 1929
Alabama	239,170	247,701	— 8,531	— 3.4	277,146	285,533	— 8,387	— 2.9
Arizona	98,480	98,327	+ 153	+ 0.1	110,525	109,013	+ 1,512	+ 1.4
Arkansas	193,218	193,396	— 178	— 0.1	220,204	233,128	—12,924	— 5.5
California	1,810,969	1,760,308	+50,661	+ 2.8	2,041,356	1,974,341	+67,015	+ 3.4
Colorado	276,847	274,988	+ 1,859	+ 0.6	308,509	303,489	+ 5,020	+ 1.7
Connecticut	279,830	278,057	+ 1,773	+ 0.6	331,026	328,063	+ 2,963	+ 0.9
Delaware	45,533	44,728	+ 805	+ 1.7	56,109	54,960	+ 1,149	+ 2.1
Florida	274,705	288,684	—13,979	— 4.8	327,801	345,977	—18,176	— 5.2
Georgia	294,461	310,362	—15,901	— 5.1	341,580	358,905	—17,325	— 4.8
Idaho	104,526	104,398	+ 128	+ 0.1	119,077	118,074	+ 1,003	+ 0.8
Illinois	1,430,676	1,411,753	+18,923	+ 1.3	1,638,260	1,615,088	+23,172	+ 1.4
Indiana	747,366	741,366	+ 6,000	+ 0.8	875,763	866,715	+ 9,048	+ 1.0
Iowa	706,196	714,919	— 8,723	— 1.2	778,386	784,450	— 6,064	— 0.8
Kansas	511,384	507,529	+ 3,855	+ 0.7	594,523	581,223	+13,300	+ 2.3
Kentucky	295,161	298,716	— 3,555	— 1.2	331,002	332,848	— 1,846	— 0.6
Louisiana	230,586	234,565	— 3,979	— 1.7	275,283	280,868	— 5,585	— 2.0
Maine	148,722	147,962	+ 760	+ 0.5	186,157	184,508	+ 1,651	+ 0.9
Maryland	283,870	281,034	+ 2,836	+ 1.0	321,702	319,873	+ 1,829	+ 0.6
Massachusetts	743,288	719,436	+23,852	+ 3.3	846,206	817,704	+28,502	+ 3.5
Michigan	1,161,051	1,219,158	—58,107	— 4.8	1,328,209	1,395,102	—66,893	— 4.8
Minnesota	624,902	630,703	— 5,801	— 0.9	732,972	730,399	+ 2,573	+ 0.4
Mississippi	203,443	217,362	—13,919	— 6.4	237,094	250,011	—12,917	— 5.2
Missouri	670,145	671,237	— 1,092	— 0.2	761,600	756,680	+ 4,920	+ 0.6
Montana	109,549	115,285	— 5,736	— 5.0	135,168	140,387	— 5,219	— 3.7
Nebraska	367,587	375,946	— 8,359	— 2.2	426,229	418,226	+ 8,003	+ 1.9
Nevada	23,388	25,302	— 1,914	— 7.6	29,645	31,915	— 2,270	— 7.1
New Hampshire	93,155	94,900	— 1,745	— 1.8	112,183	108,880	+ 3,303	+ 3.0
New Jersey	719,696	698,959	+20,737	+ 3.0	852,850	832,332	+20,518	+ 2.5
New Mexico	†70,450	76,000	— 5,550	— 7.3	84,150	78,374	+ 5,776	+ 7.4
New York	1,966,981	1,922,068	+44,913	+ 2.3	2,307,730	2,263,259	+44,471	+ 2.0
North Carolina	397,133	430,651	—33,518	— 7.8	453,241	483,602	—30,361	— 6.3
North Dakota	155,383	162,092	— 6,709	— 4.1	183,019	188,046	— 5,027	— 2.7
Ohio	1,555,093	1,560,182	— 5,089	— 0.3	1,759,363	1,766,614	— 7,251	— 0.4
Oklahoma	490,947	510,401	—19,454	— 3.8	550,331	570,791	—20,460	— 3.6
Oregon	234,766	247,131	—12,365	— 5.0	252,123	269,007	—16,884	— 6.3
Pennsylvania	1,534,834	1,515,875	+18,959	+ 1.3	1,753,521	1,733,283	+20,238	+ 1.2
Rhode Island	116,792	114,010	+ 2,782	+ 2.4	136,423	134,009	+ 2,414	+ 1.8
South Carolina	192,141	205,683	—13,542	— 6.6	218,402	231,274	—12,872	— 5.6
South Dakota	180,195	181,419	— 1,224	— 0.7	205,172	204,199	+ 973	+ 0.5
Tennessee	330,436	329,697	+ 739	+ 0.2	368,259	362,431	+ 5,828	+ 1.6
Texas	1,159,139	1,165,150	— 6,011	— 0.5	1,365,896	1,348,107	+17,789	+ 1.3
Utah	96,128	95,661	+ 467	+ 0.5	113,997	112,661	+ 1,336	+ 1.2
Vermont	78,398	84,471	— 6,073	— 7.2	86,624	93,030	— 6,406	— 6.9
Virginia	318,582	328,525	— 9,943	— 3.0	375,889	387,205	—11,316	— 2.9
Washington	382,874	379,995	+ 2,879	+ 0.7	446,062	442,341	+ 3,721	+ 0.8
West Virginia	225,900	228,715	— 2,815	— 1.2	266,273	268,888	— 2,615	— 1.0
Wisconsin	677,452	689,447	—11,995	— 1.7	782,562	793,502	—10,940	— 1.4
Wyoming	51,579	51,880	— 301	— 0.6	61,501	60,680	+ 821	+ 1.4
District of Columbia	139,733	135,455	+ 4,278	+ 3.1	156,676	151,450	+ 5,226	+ 3.4
Total	23,042,840	23,121,589	—78,749	—0.34	26,523,779	26,501,443	+22,336	+0.08

*Includes taxes and busses in most states. †Decrease due in part to registering of small trucks as trucks formerly classified as passenger cars.

New Car Registrations by Makes the Last Five Years

(From Automobile Trade Journal)

Make	1926	1927	1928	1929	1930	Five Years	Per Cent of Total 5 Years
Auburn	7,117	9,835	11,153	17,853	11,270	57,228	.37
Cord	.....	.....	.....	799	1,879	2,678	.02
Austin	.....	.....	.....	.....	4,354	4,354	.03
Chrysler	129,966	154,234	141,800	84,520	60,908	571,428	3.67
De Soto	.....	.....	14,528	59,614	35,267	109,409	.70
Dodge	223,377	123,918	148,541	115,774	64,105	675,715	4.34
Plymouth	.....	.....	29,321	84,969	64,301	178,591	1.15
Durant	91,794	56,781	71,263	47,716	21,440	288,994	1.86
Ford	1,189,004	393,424	481,344	1,310,147	1,055,097	4,429,016	28.44
Lincoln	7,670	6,460	6,027	6,151	4,356	30,664	.20
Franklin	7,173	7,526	7,423	10,704	7,482	40,308	.26
Buick	229,597	232,428	195,691	172,307	122,656	952,679	6.12
Cadillac	24,735	18,748	18,133	14,936	12,078	88,630	.57
La Salle	.....	10,971	18,755	20,290	11,262	61,278	.39
Chevrolet	493,852	647,810	767,867	780,014	618,884	3,308,427	21.27
Oakland	49,539	41,843	37,168	31,181	21,648	182,029	1.17
Pontiac	49,875	115,206	183,825	158,273	68,389	575,568	3.70
Oldsmobile	48,512	48,573	73,607	93,483	50,510	314,685	2.02
Graham	30,401	18,588	58,415	60,487	30,140	198,031	1.27
Essex	130,812	167,810	177,152	191,337	63,338	730,449	4.69
Hudson	68,697	57,658	48,311	62,692	30,466	267,824	1.72
Hupmobile	37,874	33,809	55,441	44,337	24,307	195,768	1.26
Marmon	3,546	10,095	14,759	22,323	12,369	63,092	.41
Nash	118,256	109,979	115,019	105,146	51,086	499,486	3.21
Packard	28,727	31,355	42,890	44,634	28,318	175,924	1.13
Peerless	10,164	9,872	7,748	8,318	4,021	40,123	.26
Reo	10,435	22,144	21,367	17,319	11,450	82,715	.53
Pierce Arrow	5,526	5,836	5,736	8,386	6,795	32,279	.21
Studebaker	94,079	94,839	107,033	82,839	56,526	435,316	2.80
Stutz	3,532	2,906	2,412	2,949	814	12,613	.08
Willys, Whippet, Overland	96,848	100,206	191,301	162,366	51,687	602,408	3.87
Willys-Knight	45,662	39,200	39,661	37,343	14,079	175,945	1.13
Miscellaneous	62,163	51,484	39,708	20,390	4,697	178,442	1.15
Total	3,298,933	2,623,538	3,133,399	3,880,247	2,625,979	15,562,096	100.00

Durant includes Star and Flint; Graham includes Paige and Jewett; Studebaker includes Erskine; Buick includes Marquette; Olds includes Viking; Stutz includes Blackhawk; Marmon includes Roosevelt; Miscellaneous includes Chandler, Moon, Jordan, Gardner, Locomobile, Falcon and others.

such a list it would be to their advantage to prepare one.

Circulars may be printed or letters multigraphed telling why oil should now be changed, and why transmission and differential lubricants should be replaced with summer grades.

On every lubrication reminder card could be printed a few sentences telling of other services and other goods, to be obtained at a marketer's service stations. An outline of combination offerings could be used on some card mailings.

But if a combination offer is made, set a definite time limit on it and hold to the limit. That is the secret of department store special sales. If you do not set a time limit, your special becomes only a price cutting combination.

The spring market is here. It may be a little less lucrative than the market a year ago if one is to judge it by the automobile registrations as of the ends of 1929 and 1930, but a great volume of business can be obtained from it if it is intensively cultivated.

One table published herewith gives the registration figures by states for passenger cars and all automotive vehicles, including trucks and busses, for the two years. Another shows the number of automobiles of various makes that have been sold in the United States the last five years. These sales figures are taken from Automobile Trade Journal for April, 1931.

The total new car registrations, as represented by the sales figures, are cars on the road today with the exception of a relatively few that have been wrecked. Of the 15,562,096 new car sales the past five years about 15,460,000 are still in service. That means that approximately 7,500,000 cars in use were made previous to 1926. These figures are exclusive of trucks, motor cycles, road tractors and other commercial vehicles.

Accompanying tables show the increases and decreases in passenger cars and trucks by geographical divisions. Gains in passenger car registrations in 1930 over 1929 registrations were made in the New England, Middle Atlantic and Pacific Coast regions. A few inland states made gains but in general the inland states reflected the lower level of business in 1930.

Increases and Decreases in Passenger Car Registrations 1930 Compared with 1929

New England States

	Increase	Decrease
Maine	760	.....
New Hampshire	.....	1,745
Vermont	.....	6,073
Massachusetts	23,852	.....
Rhode Island	2,782	.....
Connecticut	1,773	.....
Total	29,167	7,818
Net Gain	21,349	

Middle Atlantic States

New York	44,913	.....
Pennsylvania	18,959	.....
New Jersey	20,737	.....
Delaware	805	.....
Maryland	2,836	.....
District of Columbia	4,278	.....
Total	92,528	0
Net Gain	92,528	.....

Southeastern States

Virginia	.....	9,943
West Virginia	.....	2,815
Kentucky	.....	3,555
Tennessee	739	.....
North Carolina	.....	33,518
South Carolina	.....	13,542
Georgia	.....	15,901
Florida	.....	13,979
Alabama	.....	8,531
Mississippi	.....	13,919
Total	739	115,703
Net Loss	.....	114,964

East Central States

Ohio	.....	5,089
Indiana	6,000	.....
Illinois	18,923	.....
Michigan	.....	58,107
Wisconsin	.....	11,995
Total	24,923	75,191
Net Loss	.....	50,268

West Central States

Minnesota	.....	5,801
Iowa	.....	8,723
Missouri	.....	1,092
North Dakota	.....	6,709
South Dakota	.....	1,224
Nebraska	.....	8,359
Kansas	3,855	.....
Total	3,855	31,908
Net Loss	.....	28,053

Southwestern States

Oklahoma	.....	19,454
Arkansas	.....	178
Louisiana	.....	3,979
Texas	.....	6,011
Total	0	29,622
Net Loss	.....	.....

Rocky Mountain States

Montana	.....	5,736
Idaho	128	.....
Wyoming	.....	301
Colorado	1,859	.....
Utah	467	.....
Nevada	.....	1,914
New Mexico	.....	5,550
Arizona	153	.....
Total	2,607	13,501
Net Loss	.....	10,894

Pacific Coast States

California	50,661	.....
Oregon	.....	12,365
Washington	2,879	.....
Total	53,540	12,365
Net Gain	41,175	.....
U. S. Net Loss	.....	78,749

Increases and Decreases in Truck and Commercial Car Registrations in 1930 Over 1929 Registrations

New England States

	Increase	Decrease
Maine	891	.....
New Hampshire	5,048	.....
Vermont	.....	333
Massachusetts	4,650	.....
Rhode Island	.....	368
Connecticut	1,190	.....
Total	11,779	701
Net Gain	11,078	

Middle Atlantic States

New York	.....	442
Pennsylvania	1,279	.....
New Jersey	.....	219
Delaware	344	.....
Maryland	.....	1,007
District of Columbia	948	.....
Total	2,571	1,668
Net Gain	903	

Southeastern States

Virginia	.....	1,373
West Virginia	200	.....
Kentucky	1,709	.....
Tennessee	5,089	.....
North Carolina	3,157	.....
South Carolina	670	.....
Georgia	.....	1,424
Florida	.....	4,197
Alabama	144	.....
Mississippi	1,002	.....
Total	11,971	6,994
Net Gain	4,977	

East Central States

Ohio	.....	2,162
Indiana	3,048	.....
Illinois	4,249	.....
Michigan	.....	8,786
Wisconsin	1,055	.....
Total	8,352	10,948
Net Loss		2,596

West Central States

Minnesota	8,374	.....
Iowa	2,659	.....
Missouri	6,012	.....
North Dakota	1,682	.....
South Dakota	2,197	.....
Nebraska	16,362	.....
Kansas	9,445	.....
Total	46,731	0
Net Gain	46,731	

Southwestern States

Oklahoma	.....	1,006
Arkansas	.....	12,746
Louisiana	.....	1,606
Texas	23,800	.....
Total	23,800	15,358
Net Gain	8,442	

Rocky Mountain States

Montana	517	.....
Idaho	875	.....
Wyoming	1,122	.....
Colorado	3,161	.....
Utah	869	.....
Nevada	.....	356
New Mexico	*11,326	.....
Arizona	1,359	.....
Total	19,229	356
Net Gain	18,873	

Pacific Coast States

California	16,354	.....
Oregon	.....	4,519
Washington	842	.....
Total	17,196	4,519
Net Gain	12,677	
Total Gain in U. S.	101,085	

*Large increase due to change in registration method for small trucks formerly classified as passenger cars.

3 KEY Sectional Type Stream Line Flow FITTINGS

K-3600 Series

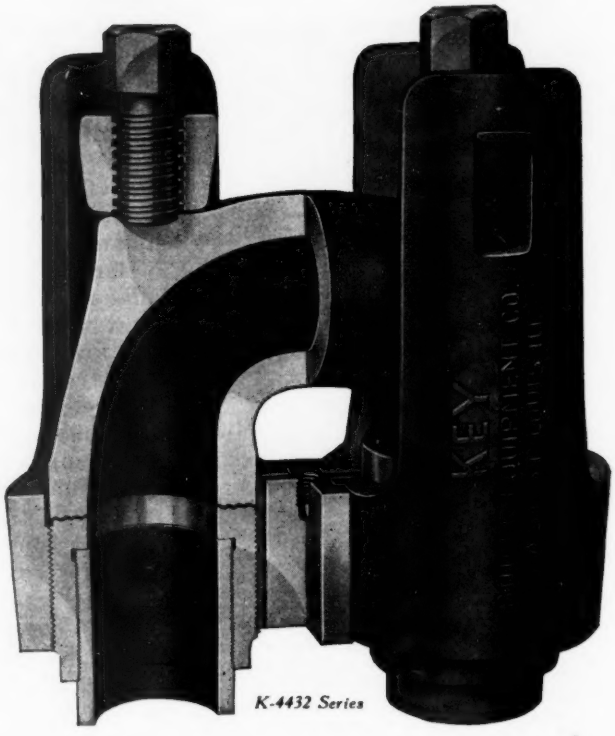
K3600 Series

Sectional view shows tapered joint principle; also serrations for rolled-in tubes.

The K3600 and K4432 series are regularly supplied with forged steel shackles and cast steel U-bends, but we can furnish them with forged steel U-bends when specified.

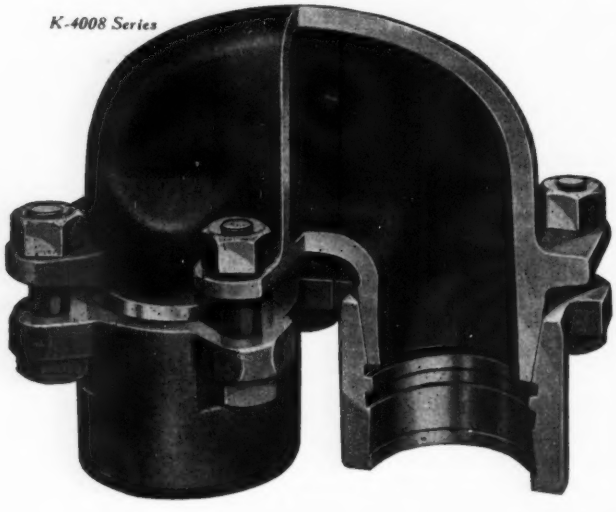
K4432 Series

Multiple ring joint type. Illustration shows how tube end pieces are threaded on inside for reception of tubes, and threaded on outside to screw into shackles. Also note special interlocking device which holds the assembly in place under the most extreme operating conditions.



K-4432 Series

K-4008 Series



K4008 Series

Condenser type fitting, with tapered joints. For rolled-in tubes. Adapted for low-pressure stills, condensers, feed water economizers, tar coolers, etc. Can be furnished with forged steel tube ends and cast steel U-bends, or of cast iron throughout, plain or galvanized.

KEY BOILER EQUIPMENT CO., INC.

East St. Louis, Ill.

1237 Chrysler Bldg.
New York, N. Y.

733 Mayo Building
Tulsa, Okla.

2814 Santa Fe Ave.
Los Angeles, Cal.

Volatility of Gasoline Limited By Design of Fuel Systems

By Arch L. Foster

N. P. N. STAFF WRITER

ST. LOUIS, April 16 INCREASES in the maximum permissible vapor pressure for motor fuels as great as five pounds per square inch Reid, are made possible by simple changes in automobile fuel system design. This is shown in exhaustive results made public by technologists of the U. S. Bureau of Standards at the mid-year meeting of the American Petroleum Institute division of refining here April 15 and 16.

These changes in construction of the fuel system merely keep the fuel pump lines and carburetor cooler and avoid vapor lock, which is the limiting factor controlling the practical volatility of fuels and thereby their ease of starting and certainty of operation.

Discussion of the details of federal specifications for motor fuels and for Class D lubricants occupied a considerable amount of time during the meeting, and it appears that the adoption of new master specifications for both these types of products will very likely be announced soon.

New Gasoline Specifications

In the new U. S. Motor gasoline specification now being circulated by the Board the items of sulfur content, corrosion test, etc., are unchanged. In the distillation requirement the end point has been dropped from the specification, only three points being specified. The per cent evaporated (obtained by adding the per cent of distillation loss to the amount collected in the receiver at the three specified temperature), shall not exceed 10 per cent at 75 C., (167 F.), 50 per cent at 140 C., (284 F.), and 90 per cent at 200 C., (392 F.). The residue shall not exceed two per cent.

The vapor pressure shall not exceed 12 pounds Reid at 37.8C., (100 F.), by A. S. T. M. Method D323-30T, with the additional provision that one pound extra may be permitted when the shipment is sampled at refinery or other point of origin to allow for evaporation losses in shipment.

The government further reserves the right to reject shipments during December, January, February and March in localities where the January normal mean temperature is less than 27F. if less than 10 per cent is evaporated at 65C. (149F.), or if the vapor pressure at 37.8C. (100F.), exceeds 10 pounds Reid. Similarly, rejection may be made during June, July, August and September if vapor pressure at 37.8C. (100F.) exceeds eight pounds Reid.

The Federal Specifications Board will be glad to receive comments on the proposed specifications.

Two sections of the institute manual on prevention of refinery accidents were presented in tentative form for discussion by the group, the first being on "Cleaning Petroleum Tanks," the second on "Oxyacetylene and Electric Cutting and Welding." While no statements of the content of these sections were authorized, the work has been fairly well completed, and the final drafts may be prepared for the annual meeting in Chicago in November.

The use of alloys for specific purposes in refinery work, especially high pressures and temperatures, has made immense strides in the last three or four years. Alloys of nickel and chromium of the so-called 18-8 type, containing about 18 per cent chromium and 8 per cent nickel alloy with low carbon steel containing not more than about 0.07 per cent carbon in the alloy, have shown the best results so far in pressure still work. They combine high tensile strength with high resistance to deformation or bulging, said H. D. Newell, of the Babcock & Wilcox Tube Co., in a paper on the subject.

Difficulties have been experienced with these tubes in some cases caused by overheating. When overheated, the tubes do not show a bulge preparatory to rupture, but split without visual warning. The number of failures has been an extremely small percentage of the total number of tubes in use, however. The author showed results of tests made on tubes which had failed in service, compared with tests on specimens of new materials which had purposely been overheated for long periods. These results indicated clearly, in the opinion of those present acquainted with the subject, that overheating was the cause of failure.

Poorly Designed Fuel Systems Lower Fuel Volatility

Dr. O. C. Bridgeman, fuel technologist of the Bureau of Standards, gave a complete presentation of the case against the faulty design of fuel systems which limits the volatility of motor fuels which may be used with reasonable freedom from vapor lock. He showed the results of tests carried out in his laboratory and on the road on 27 commercial motor cars, and the variation of the temperature differences between that of the atmosphere and that of the fuel system in different cars shows a wide range. (See NATIONAL PETROLEUM NEWS, April 15, 1931, page 51, for complete paper.)
(See abstract of Newell's paper, NATIONAL PETROLEUM NEWS, April 15, 1931, page 49.)

Briefly, his results show that the vapor pressure of a fuel in an ideal fuel system, at 90 F. atmospheric temperature, must be less than 16 pounds Reid. While idling, this pressure cannot be greater than eight pounds, and at 40 miles per hour not greater than 10 pounds Reid, in the average car as at present manufactured. In comparing the best and the worst cars tested it was found that the best could operate satisfactorily with a fuel of vapor pressure as high as 18 pounds. With the worst a pressure less than seven pounds was necessary for proper performance, each at 70 F. atmospheric temperature.

The most significant result revealed by the author, from the points of view of the motor manufacturer and refiner, was that obtained by attempts to discover what might be done to improve the fuel system arrangement.

It was found that the difference in the fuel pump inlet temperatures recorded when the fuel line from tank to pump was placed outside the frame channel in the car instead of inside, was as great as 34 degrees F., which difference, according to the author, represents a difference in maximum permissible vapor pressure of approximately five pounds Reid.

Other methods which might be used by the designer to further improve this situation suggested in the paper are: insulation of fuel line and fuel pump from the heat of the engine and exhaust pipe; placing pump in such position as to receive more positive cooling by the air stream from the fan, and in locating the fuel pump in a position less exposed to engine heat.

Calculations based on Dr. Bridgeman's data on the difference between the various types of fuel systems, as reported by G. G. Oberfell, show that if the "average" fuel system were so improved as to equal the "best" system reported, the amount of volatile hydrocarbons which could safely be included in motor fuels would be 8.7 per cent greater than is now the case.

Inasmuch as a comparable quantity of heavy ends in this case could be included in the motor fuel to produce a relatively similar fuel, the total yield of available motor fuel which could be produced from the same raw material would be increased 15 to 18 per cent, approximately, the speaker pointed out.

Knock Test Method Nearing Completion

A short summary of the accomplishments of the cooperative committee in developing a standard knock test method was presented by Dr. H. C. Dickinson, chief of the Heat and Power Division, Bureau of Standards. The test is approaching completion, the present status being as follows:

1. A standard test fuel has been determined upon and adopted as primary standard, being a mixture of normal heptane in iso-octane, in varying proportions; two secondary standard fuels have been prepared by the Standard Oil Co. of New Jersey, to supply the refiner with a fuel for routine determinations.

2. A standard test engine has been developed with the cooperation of Dr. H. L. Horning and the Waukesha Motor Co., of which he is president. The engine is practically standardized, and probably will be adopted essentially in its present details.

3. Completion of the standard method of procedure is near. Final comparison of data from different laboratories is now being made and small changes in details of method are being considered.

By unanimous vote of the members, the American Petroleum Institute committee on refinery technology was disbanded at its session here the 15th, its functions having been alloted to other committees.

An ideal or model gasoline tax law is being formulated by members of the institute committee on standard tests and specifications, and is to be recommended to the states to supersede their present laws, according to the report of the committee presented by K. G. MacKenzie, of The Texas Co., chairman. The two standard oils for calibrating viscosimeters, prepared by Dr. T. G. Delbridge, of the Atlantic Refining Co., are ready for distribution, and a standard procedure is being prepared and will be printed for circulation to the industry.

A. R. Ogston, head of the technical depártment of the Cities Service organization in Great Britain

British Technologist Visiting in U. S.

CLEVELAND, April 16.—A. R. Ogston, head of the technical department of the Cities Service Oil Co. Ltd., of England is spending several months in this country, studying the manufacturing methods, new developments in processes and products of the parent company.

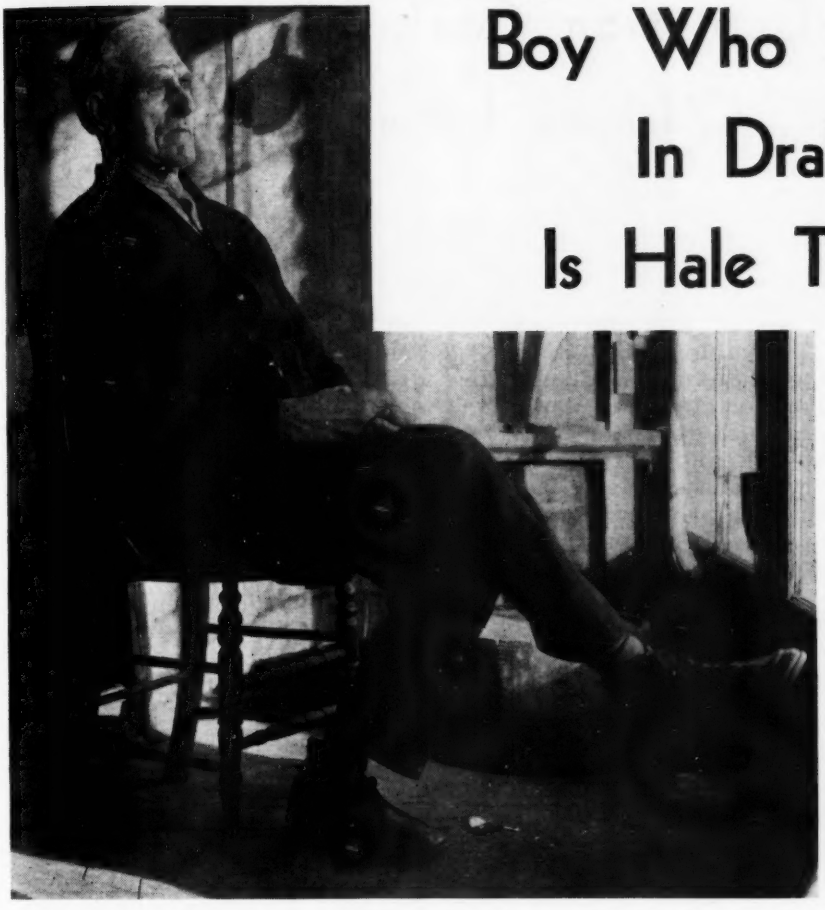
Mr. Ogston attended school in England, majoring in chemistry and physics, later joining the British organization of this company. He has charge of technical work of the company, including standardization and laboratory work in connection with motor fuels, lubricants and other products marketed in England, and has been with the company over four years.

Rumors that the company is planning expansion of the scope and facilities of its technical department in England are unconfirmed. The company has made every effort to understand and to study the requirements of the British market, and to supply to the English consumer the type of product which best meets his needs; the laiason between foreign marketing units and the manufacturing organization of the parent company has always been close, and will become still closer in the future.

ADVERTISING PAGES REMOVED

Boy Who Saw First Oil In Drake Well Is Hale Today at 88

By Harry Botsford



Sam Smith, only survivor of the group that witnessed the birth of the petroleum industry

HE'S 88; sound as a nut and bright as a dollar, and more active than the ordinary man of 50. Almost every day I see him striding along a country lane and when the concrete is dry he straddles a bicycle of ancient vintage and does six miles or more through motor traffic without batting an eye—and both of his eyes are still good!

He's the last of the Old Guard, the only living being who has an authentic claim to being one of the immortals who helped to drill the world's first artesian oil well at Titusville, Pa., which broke into the news late in August, 1859.

Sam Smith is his name, plain, unadorned Sam Smith. Like his father, he is a plain man; his father's name was William Smith, and I suspect they used to call him Bill Smith. His father, you will remember, once drilled artesian salt water wells at Tarentum in Pennsylvania and was hired by Edwin L. Drake to come to Titusville where Drake had been working fruitlessly and almost hopelessly at the task of increasing the oil seepage from a spring along the banks of Oil Creek.

Sam Smith was 16 when his father completed the contract of drilling the first oil well. Indeed, it was Sam's keen young eyes peering down the hole that first noted that oil had been struck.

He remembers the saga of Johnny Steele, who crashed into renown as the greatest spender of his time when he inherited the savings of an aunt who indiscreetly attempted to light a fire with a bucket of crude oil. "Coal Oil Johnny" he remembers.

And he remembers Pit Hole City when it zoomed into being as the first oil boom town and was the third largest post office in the state. And he remembers—and grins a little at the recollection—when Pit Hole City marched down the hill again.

He remembers the "Moonlighter's War" that resulted from the invention of one Roberts of the present method of "shooting" an oil well. Roberts, being an astute and shrewd individual patented his idea and charged a lusty price to oildom—when they used it. Mostly, however, they insisted on using the surreptitious services of some hardy and chance-taking gentry who mixed nitro in tubs and poured it into jugs which they slung over their backs and went forth on moonlight nights to shoot wells, *sans* benefit of the Roberts organization. At greatly reduced prices, one might add!

Early in life Sam Smith left the oil industry and became a carpenter. A good carpenter, too! While he helped to tap a vein of wealth that is almost beyond estimate he has never profited from it. And he is not bitter about the oversight, either. He is, in the parlance of a small town, "well fixed."

When the proposed Drake Memorial Park is dedicated Sam Smith will be an interested spectator. You may rest assured that he will be a spectator, for he's modest and unassuming. As he stands there, amid whatever pomp and ceremony surround the occasion, I wonder just what he will be thinking about?

Maybe, just a little wistfully, about a lad of 16 who peered down the iron throat of a joint of casing and seeing the surface of the water covered with a goodly scum of oil, jumped to his feet and yelled: "We've hit it!"

* * *

TODAY the oil industry—now grown to immense size—has the opportunity to preserve the site where Sam Smith witnessed its birth. The opportunity lies in a contribution—a dollar, or $100 or more, if you wish—to the Drake Well Fund which is to be used in building a small park

on the Oil Creek flood plain on which Drake drilled the first petroleum well.

Citizens and former citizens of Titusville who have gone to other oil fields are acquiring the grounds about the Drake well and will deed them to the state of Pennsylvania, which has already declared the site a state park and by legislative enactment, signed a few days ago by Gov. Pinchot, has agreed to maintain it as a state park.

It is up to the oil industry, however, to contribute a sufficient sum to clear and landscape the grounds that are to be bought by Titusville people, and to protect with dikes the site from Oil Creek flood waters.

William R. Boyd, Jr., executive vice-president of the American Petroleum Institute, has consented to be treasurer of the fund. Expenditures will be by a board of trustees from the oil country but under the general direction of a committee which Mr. Boyd heads and whose other members are: W. M. Irish, Atlantic Refining Co.; Christy Payne, Standard Oil Co., of New Jersey; L. W. Young, South Penn Oil Co., and Charles L. Suhr, The Pennzoil Co.

Published herewith is a coupon which may be used.

Subscribe to Drake Well Memorial Fund!

(Use This Coupon)

Mr. William R. Boyd, Jr.
American Petroleum Institute,
250 Park Avenue,
New York City

Enclosed is my check for $..... as my contribution to the memorial to the Founder of our industry.

OR

In consideration of pledges by others, I subscribe and agree to pay $..... to the Drake Well Fund on..... 1931, and ..... 1931.

(Name) .....

(Address) .....

Make Checks Payable to William R. Boyd, Jr., Treasurer, Drake Well Fund

Depletion Confused in New Oklahoma Income Tax Law

TULSA, April 16

OIL company tax men are studying the new Oklahoma income tax law, which applies to both individual and corporation incomes for 1931, payable in 1932.

One of the puzzling questions is that pertaining to depletion. The legislature, after much debate back and forth between the two houses, finally inserted a depletion provision that has a loose end. In a letter on this subject to the executive committee of the Kansas-Oklahoma division of the Mid-Continent Oil & Gas Association, Secretary Harry H. Smith said:

". . . . The bill was written and rewritten by the tax commission and a number of amendments were put in by the Senate. There was no opportunity to get the bill written in a manner that would free it from ambiguities and conflicting provisions. It was rushed through without sufficient study and will doubtless cause a great deal of trouble in its administration.

"The tax commission and the governor opposed the inclusion of the federal provision on depletion. The Senate, however, attempted to insert it and did get into the bill a paragraph to the effect that the depletion deduction should amount to 27½ per cent of gross providing it did not exceed 50 per cent of net.

"Thus far the federal provision was followed but, in the confusion on the floor, the proviso that in no event the depletion allowance should be less than that computed upon cost was lost sight of and there was no opportunity to get the provision amended to that effect, the fight being so bitter that friends of depletion were afraid to reopen the question for further amendment.

"However,I believe that upon construction of the whole act, cost depletion will be allowed where it exceeds 27½ per cent of gross limited by 50 per cent of net income because, otherwise, the tax would be converted into a tax upon capital instead of income."

Both personal and corporation incomes are taxed under the new law at the same rate, as follows:

2 per cent on net income up to and including $10,000.

3 per cent on that in excess of $10,000 and not more than $20,000.

4 per cent on all net incomes above $20,000 and not exceeding $100,000.

5 per cent on all net incomes in excess of $100,000.

Personal exemptions are much less than those allowed by the federal government and the tax will be severe upon salaried persons. The unmarried individual, or the taxpayer who is not living with wife or husband is given an exemption of $750; the married taxpayer living with spouse is granted $1500 exemption. For each additional dependent member of the immediate family, the taxpayer is allowed $750.

The Mid-Continent Skyline

By Lawrence E. Smith

THIS bit of philosophy from Dr. E. R. Lederer, vice-president of the Texas Pacific Coal & Oil Co.:

E. W. Zublin, of that company, was talking of recent events in the Fort Worth-Dallas district. "There was a big debate on religion not long ago," he said. Clarence Darrow, a Catholic priest, a rabbi and a Protestant minister gave their ideas on religion."

"But they didn't settle it," remarked Dr. Lederer.

* * *

The annual meeting of the Panhandle Geological Society, held at Amarillo late in March, was made a farewell dinner in honor of H. E. Crum, district geologist for the Skelly Oil Co., who resigned to go to Charleston, W. Va., with the Columbian Carbon Co. and Thad Hoke, of the Delmar Oil Co., who moves to San Antonio.

Officers elected for the coming year were J. D. Thompson, Jr., president; H. T. Morley, first vice-president; J. V. Terrill, second vice-president, and A. R. Kautz, secretary-treasurer.

* * *

Gillette Hill, closely identified with Mid-Continent development for the past 10 years, has resigned from the Phillips Petroleum Co. to become a vice-president of the Moody-Seagraves-Morgan Corp., Houston. He has moved to Houston.

Mr. Hill came to Tulsa in 1921 as a scout for the Waite Phillips Oil & Gas Co. and at the time that company was sold to the Barnsdall Corp. he was in charge of the Texas division. When Mr. Phillips formed the Philmack Oil Co. Mr. Hill was made vice-president and retained that position when the Independent Oil & Gas Co. acquired the Philmack. Still another merger occurred, that of the Phillips and the Independent, with Mr. Hill remaining as a vice-president of the Phillips. His specialty is land department work and he has handled the leasing of many thousands of acres in the Mid-Continent and Texas.

* * *

Kansas City—(A.P.)—Col. Amos W. W. Woodcock, director of prohibition for the United States, arriving here Wednesday on a routine tour of inspection, expressed enthusiasm at the progress being made in enforcement of the nation's dry laws.—News Item.

Isn't it possible, colonel, that you are mistaking hard times for enforcement?

* * *

After struggling around all winter trying to break 100, Ellick Botts, the consulting pumper, turned in a card of 92 last week and immediately rushed to the newspapers with a statement to the effect that business has at last turned the corner and that things are definitely on the up-grade. It is true, Mr. Botts admitted, that he conceded himself a couple of short putts, but that is to be interpreted merely as a temporary reaction and of no effect upon the basis of business, which is fundamentally sound.

Gillette Hill

* * *

One of the tragedies of oil field development that come occasionally was that of the death of Ralph W. Loucks, Rocky Mountain division superintendent of the Carter Oil Co. Late in March with two other men he was "blowing" a gas well in the Billy Creek field, north of Salt Creek. Whether he was struck by a rock blown from the well or by a timber that fell from the rig is not known; when the other men came out of the cellar he lay near the derrick. Apparently he was killed instantly.

Mr. Loucks was 52 years old and had been in the employ of the Standard interests for 33 years. He began his oil field service as a roustabout for the South Penn Oil Co. and until 12 years ago had worked in the Eastern fields.

He is survived by his widow and by one son, Eugene, a student at the University of Michigan. He was held in high esteem by his associates in the Carter Oil Co. and by his many friends in the various parts of the oil country where he had worked.

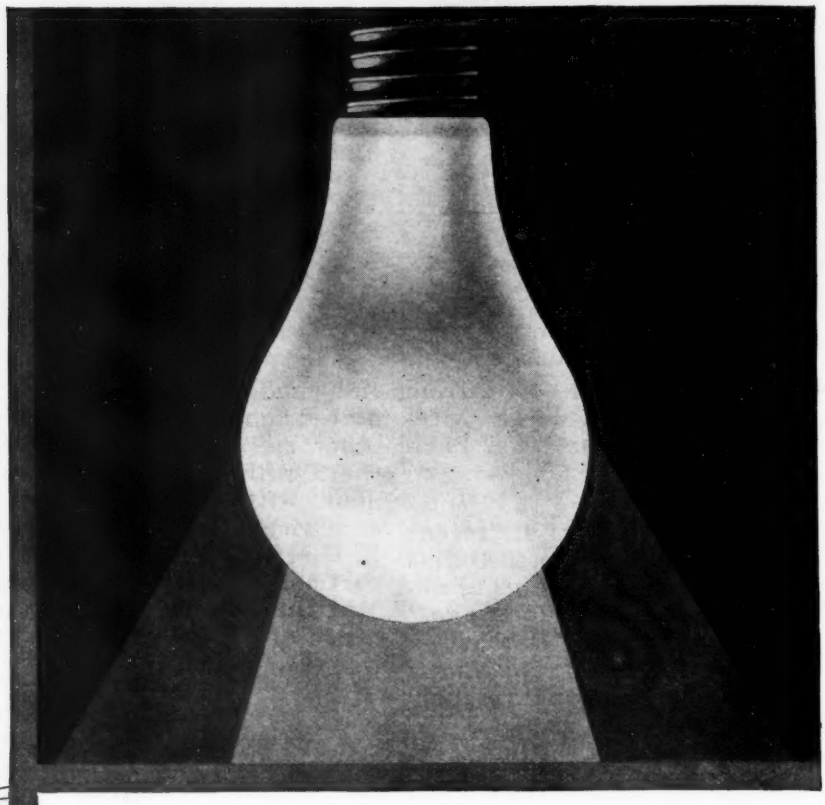
His duties have been assumed by W. J. Rapson, who for several years was Mr. Louck's assistant.

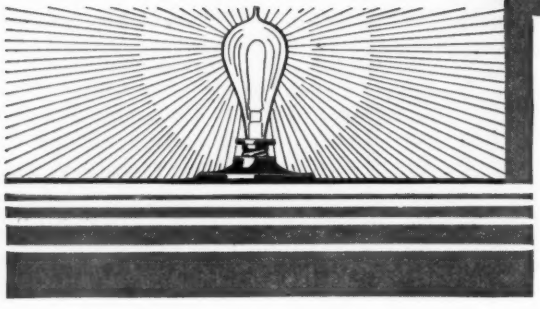
CARBON LIGHTS

were a miracle but —

TUNGSTEN LIGHTS

were better . . .





Gasoline was *good enough* until *Ethyl* was found

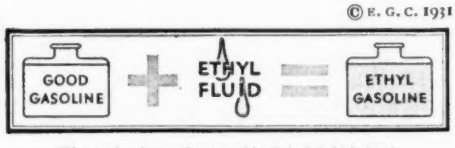
IN 1881, the world called the incandescent lamp "the modern miracle." For twenty-five years everyone was satisfied that the ultimate had been achieved. But William Coolidge searched for a filament more lasting, more brilliant, more economical than carbon; and tungsten filaments were produced.

The automobile saw rapid improvement at first, but in 1921 it had apparently reached its "peak." Gasoline could not stand the pressures necessary to increased efficiency. The world accepted the automobile as a "miracle" and was satisfied.

But then Ethyl fluid was discovered and more efficient pressures were made possible. Higher compression engines began to appear with increased power, greater speed, faster acceleration and cooler combustion.

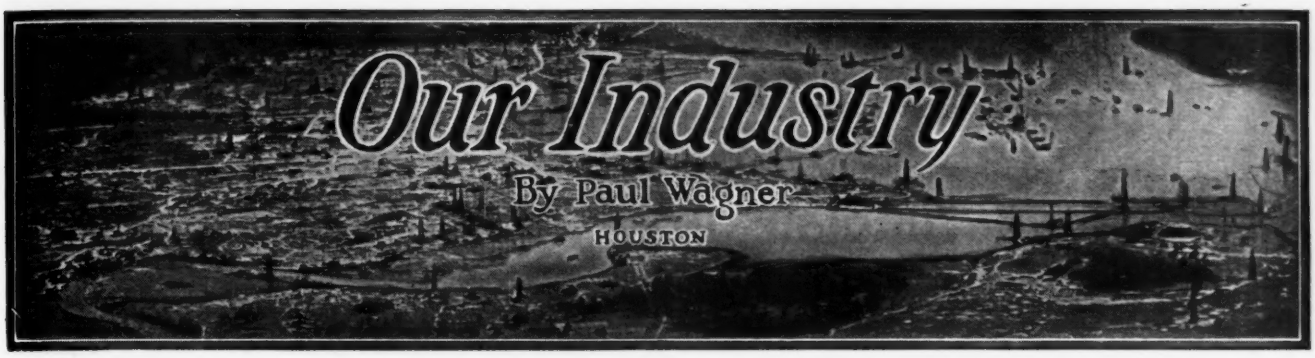
Good gasoline *plus* Ethyl made better automobiles possible. It provided a powerful, smooth-burning fuel that would not detonate under high pressures. What tungsten did for the light industry, Ethyl is doing for the oil and automotive industries. The progress it made possible in the automotive world created today's fast-growing demand for quality fuel. Ethyl Gasoline Corporation, Chrysler Building, New York City.

© E. G. C. 1931



The active ingredient used in Ethyl fluid is lead

ETHYL GASOLINE



CHARLES P. LINK, long identified with operations in West Texas and more recently engaged in Taylor field development, in Williamson county, has turned his attention to the Rusk county division of the Sabine Uplift region. He continues to live at Dallas, but may be found around Tyler or Longview most any time.

Mr. Link was one of the founders of the Taylor-Link Oil Co., operated from Houston and San Angelo, which gained important place in Permian salt basin development several years ago. Later, he sold his interest in that company, resigning from its directorate and engaging in business for himself.

* * *

R. E. Powell, manager of the Humble Oil & Refining Co.'s Baytown plant, who had been confined to a Houston hospital for two weeks, is now back in his office regularly.

* * *

The political fabric surrounding the Railroad Commission of Texas, which administers the state's oil conservation laws, assumes an interesting study when the background of its organization is taken into account. Chairman C. V. Terrell was originally appointed commissioner by Pat M. Neff, now an associate on the state board, when Mr. Neff was governor. Later, Mr. Terrell was duly nominated and elected to the place.

Meantime, Mr. Neff had been appointed to the commission by the then Governor Moody, and became its chairman. Under a revolving plan, Mr. Neff recently surrendered the chairmanship to Mr. Terrell. Lon A. Smith of Henderson, Rusk county, was elected to the commission while serving as state comptroller. Now, former Governor Moody, as chief counsel for East Texas anti-prorationists, is fighting their battle against the commission members attempting to uphold statutes seeking to prevent physical waste.

* * *

George R. Elliott is now district petroleum and natural gas engineer for the province of Alberta, Canada. He is stationed at Lethbridge.

* * *

William D. Waltman, representing a group of oil and royalty companies with interests in Texas and the Rocky Mountain region, will transfer his offices from New York City to Los Angeles, May 1. Included are the McElroy Ranch Co., owning royalties under Crane county, Texas, properties; the Franco Wyoming Oil Co.; Franco Western Oil Co.; and Isolantite, Inc.

* * *

R. N. Ferguson, recently appointed general manager of the Bolsa Chica Oil Corp., is one of the most widely known geologists in Southern California. At one time he was Los Angeles manager of the old Marland Oil Co. of California, working with Carl H. Beal as executive vice president and Roy E. Collom, chief geologist, in the early days of the organization. Mr. Ferguson later engaged in private practice and the handling of his federal permits on Kettleman Hills lands.

Charles P. Link

* * *

Odie R. Seagraves has been named chairman of the board of directors and William F. Morgan president of the Saxet Co., under merger with the Moody-Seagraves Producing Co. The Saxet Co. is the holding corporation for a group of subsidiaries know as the Saxet Gas Co., the Saxet Oil Co., Saxet Sand & Gravel Co., and the Corpus Christi Warehouse Co. Total assets of the Saxet group have been estimated at about $18,500,000.

* * *

Supt. L. E. Lewis of the Van field unified development, eastern Van Zandt county, Texas, is recovering from a major operation he underwent at the Scott & White Hospital in Temple. As field head of the Van joint account development, Mr. Lewis has overseen drilling and production work on the ground for Pure Oil Co., and other cooperative leaseowners.

* * *

Tom Coombes, widely known in the southwestern equipment industry, is now making headquarters at Longview, representing the Hercules Supply Co., in the Sabine Uplift region of East Texas. He was formerly West Texas district manager of Continental Supply Co., at Midland.

Proration as Stabilizer is Illusion, Says Sinclair in Annual Report

CLEVELAND, April 18

"THE hope that proration would stabilize prices has proved to be an illusion," H. F. Sinclair, chairman, Sinclair Consolidated Oil Corp., asserts in his annual report to stockholders. Proration has created enormous potentials which are hanging like a cloud over the oil industry, Mr. Sinclair also said.

The Sinclair corporation netted $12,026,424 in 1930, after all charges, a reserve of $7,607,695 for decline in value of investments in other companies and a markdown of $2,579,883 in inventory value. In 1929 the company netted $16,599,037.

The 1930 income included $28,887,003 from non-operating sources. This sum included the profit from the sale of the corporation's 50 per cent interest in the Sinclair Pipe Line Co. and Sinclair Crude Oil Purchasing Co. to the Standard Oil Co. of Indiana.

Gross operating earnings of the corporation amounted to $183,921,151 in 1930, compared with $196,805,604 in 1929. Costs, operating and general expenses increased more than $6,000,000 to $161,933,515. Operating income before interest, discount, depreciation, depletion and amortization amounted to $21,987,636 in 1930, compared with $41,248,704 in 1929.

Concerning general conditions in the industry the last year and in the production division particularly, Mr. Sinclair stated:

"General conditions in the industry during 1930 have not shown any improvement. However, it seems probable that we are reaching a point from which the industry can build upward. The average retail price of gasoline which is, of course, the principal petroleum product, in 1930 declined 1⅞ cents a gallon below the average price at principal points of consumption in the year 1929, and approximately 4 cents below the average price in the preceding five years. Lubricants, in the manufacture of which your company is now one of the leaders, have also declined in price. These facts are largely responsible for unsatisfactory earnings.

"In the field of production the attempt has been made to escape the inevitable effects of overdevelopment by the expedient known as proration; i. e., restriction of flush and semi-flush areas. This measure has been inequitably applied in different states and different parts of the same state. It has worked a great injustice, as for example in the Oklahoma City field where wells are allowed to flow only the equivalent of five or six days in a year; and has created enormous so-called 'potentials' of production which, though more imaginary than real, hang like a cloud over the industry.

"The hope that proration would stabilize prices has proved to be an illusion. In the 14 months elapsing since Jan. 1, 1930, the price of crude oil in the mid-continent area has been driven steadily downward from a high of $1.85 per barrel (the schedule price of 44 gravity and above) to 67 cents in March, 1931, a cut of more than 63 per cent.

"Meanwhile the continuation of drilling has added daily to a capacity to produce already in excess of market requirements. At the same time the industry had to absorb increased imports. Until these problems are faced and these conditions overcome by the industry as a whole, there seems to be no prospect of improved earnings. No one company can cure these conditions nor can any one company escape from consequences that are common to all."

Sinclair spent $35,608,000 on developments and additions last year. Major items in this sum

Condensed Income Accounts of Sinclair Consolidated Oil Corp.

	1930	1929
Gross operating earnings, exclusive of inter-company sales and inter-company transportation charges	$183,921,151	$196,805,604
Costs, operating and general expenses	161,933,515	155,556,900
	$21,987,636	$41,248,704
Non-operating income (net), including profit on sale of investments in other companies, interest received, etc.	28,887,003	2,180,818
	$50,874,639	$43,429,522
Interest and discount charges	$6,119,032	$6,324,374
Depreciation, depletion and amortization	22,541,605	20,506,111
	$28,660,637	$26,830,485
Net income before extraordinary charges	$22,214,002	$16,599,037
Amount reserved for decline in value of investments in other companies	$7,607,695	.....
Adjustment of inventories at December 31, 1930, to the lower of cost or market	2,579,883	.....
	$10,187,578	.....
Balance of net income, carried to surplus	$12,026,424	$16,599,037

Sinclair's Comparative Operating Statistics

	1930	1929	1928
Net crude oil production in the United States (bbls.)	14,835,042	16,181,960	13,629,075
Net crude oil production in Mexico (bbls.)	1,953,459	2,442,308	2,393,718
Net casinghead gasoline production (gals.)	92,060,740	106,323,408	109,664,085
Crude oil run through refineries (bbls.)	37,036,488	35,728,626	33,433,489
Gasoline sold (gals.)	949,734,880	886,934,153	876,841,681
Oil cargoes transported by ocean tank steamships (bbls.)	18,000,591	19,140,982	18,897,120

were: Development and acquisition of oil and gas leases in the United States, $12,168,000; improvements on refineries, $7,612,000; additional marketing facilities in the United States and foreign countries, $7,532,000; pipeline construction, $2,374,000; additional casinghead plants, $993,000, and tank ships $1,553,000.

The company acquired from the Pierce Petroleum Corp. 707 bulk stations and 969 retail stations in Texas, Louisiana, Arkansas, Oklahoma, Missouri and contiguous territory; 183 agencies in Mexico; 1100 tank cars; a complete refinery at Sand Springs, Okla.; a skimming plant at Tampico; a terminal at Texas City, and 400 miles of pipe lines.

It also acquired from Pierce current assets that amounted to $7,300,000 and assumed current liabilities totaling $3,570,000, and provided $1,100,000 for retirement of Pierce 8 per cent preferred stock.

Sinclair's current assets Dec. 31 amounted to $82,216,632 of which $35,794,975 was cash and $24,085,945 oil inventories at the lower of cost or market. Only the minimum crude and refined oils necessary to operate the business were carried, Mr. Sinclair said.

The excess of current assets over current liabilities amounted to $65,259,105 Dec. 31, compared with $47,569,322 at the end of 1929. The company paid off during the year $19,054,600 in funded debt and preferred stock obligations.

Dividend payments amounted to $1,131,648 on the 8 per cent preferred stock and to $9,898,378.75 on the common stock, a total of $11,030,026.75. Net profits exceeded dividend payments by almost $1,000,000.

At the end of the year Sinclair had outstanding 141,294 shares of 8 per cent preferred, and 6,152,404 shares of no par common stock. None of the authorized 5,000,000 shares of no par preferred had been issued.

The earnings after dividends on the preferred in 1930 averaged $1.77 a share on the common stock outstanding Dec. 31, 1930, compared with $2.81 a share in 1929.

California Allowable May be Cut To 460,000 Barrels Per Day

LOS ANGELES, April 17

THAT California operators would be asked to accept an additional curtailment burden was indicated at meetings of proration committees in Los Angeles the past week. Details of the new program that is expected to call for a state allowable production of approximately 460,000 barrels are to be worked out at meetings to be held within the coming week.

On the basis of a survey made by the state economic committee, the general operators' committee is attempting to determine the probable market outlet for California oil during the ensuing six months.

Although the state has an allowable production of 500,000 barrels daily, it has been producing in excess of 530,000 barrels per day during the past six months. It is now planned to set an allowable figure that will permit this excess to be wiped out during the next six months. One major company is reported in favor of an allowable production of about 435,000 barrels so that more gasoline and oil can be withdrawn from storage. The compromise between this figure and the present allowable is expected to be about 460,000 to 475,000 barrels.

It is understood that the committee on economics has suggested a plan that is predicated on the reduction of gasoline stocks on the Pacific Coast of approximately six million barrels by Sept. 1. It is also hoped to withdraw upward of 80,000 barrels of refinable crude oil daily from storage in this period.

Including exports, the total consumption of petroleum products on the Pacific Coast is now about 614,000 barrels daily, as compared with 762,000 barrels in 1930. Local and domestic market consumption is 410,000 barrels daily and decline in shipment of California products to the east coast is expected to reduce the total consumption to below 550,000 barrels.

Total bulk, shipments out of Los Angeles harbor for March last was 8,162,874 barrels, as compared with a total of 9,643,777 barrels a year ago. A large part of this 1,480,903 barrel decrease was accounted for by curtailment in shipments to Atlantic Seaboard and Atlantic Foreign ports.

At meetings of the general operators' committee next week, to be held in conjunction with officers of the Oil Producers Sales Agency, several important problems will be discussed. Executives of major oil companies have been invited to attend and tell how much oil they will purchase in the next six months.

The committee will also consider the proposed revision in the curtailment program as submitted by the special committee headed by John A. Brown, president, General Petroleum Corp. Arguments on the new state allowable as suggested by the economics committee also will be heard.

It is the purpose of these meetings to devise a plan that will be equally applicable in controlling crude oil production in town lot and acreage fields, —one that will not require exceptions to be made to individual operators because of unforeseen conditions. These exceptions have been a point of contention among independent and major operators alike.

Joins Neilan Staff

LOS ANGELES, April 16.—O. H. Seal, formerly of the Continental Oil Co., has recently joined the staff of Neilan Co. Ltd., manufacturers of automatic control and regulating equipment for the oil industry and others.

Mr. Seal is the new member of the staff in the New York office of the Neilan Co. He has had a number of years of experience in refining oil before accepting the new position. The New York office of the company is located at 30 Church street.

Unit Development and Proration Safeguard Van from Water

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON, April 16 WOODBINE sand production, notorious for the salt water which backs it up in the pay horizon, is being controlled against encroachment in the unit-developed Van field of eastern Van Zandt county, Texas.

Through unified operations and proration of production, control is exercised over good development practice, the maintenance of reservoir pressures and the avoidance of water incursions.

Completions of the Pure Oil Co., and other joint-account owners in the unified area, are being stopped 70 feet above the known water level established by edge wells of the field. The water level is at 2520 feet below sea level and the drill is being stopped regularly at minus 2450 feet.

Because of this operating policy, maximum ultimate yields will be possible from the average sand thickness of 150 feet taken by the drill at Van, or the 220 feet established as pay. In parts of the field the sand exceeds 400 feet, net thickness, after deducting for shale partings in the producing zone.

The field has been recently exploited at 40,018 barrels daily, April 1-15 proration allowable, from 226 wells in the total Van field, made up of 182 in the joint-account division and 44 in the northeast extension non-unified area. In May, the allowable is to be automatically raised to 45,000 barrels and in June to 50,000 barrels daily.

Potentials taken under 11/16-inch chokers for proration purposes show the field conservatively capable of producing 441,092 barrels daily from 3640 acres; 349,279 barrels from the 3050 acres under exploitation in the unified area and 91,813 barrels from 590 proved acres in the northeast extension.

Bottom-hole pressures have been maintained between 1100-1200 pounds and informed observers estimate there will be no dimunition in them for years to come under continued conservative field practice.

What the field could do under open flow exploitation is purely conjecture, but Van operators estimate several million barrels daily. Such a one-day maximum, however, would represent a fictitious potential and, like Yates or Hobbs, the field would be ruined by that type exploitation.[1]

The 441,092 barrels choked potential, on the other hand, is conceded by engineers to be either a true potential or possibly less than the field could safely produce under conditions of its development.

Results obtained at Van contrast with the water-flooding of the competitively-drilled Woodbine fields in the Mexia-Powell fault zone and the encroachment already appearing on the west side of the rapidly developed new Sabine Uplift region.

The Powell field of the East Texas fault zone group attained one-day peak production of 356,000 barrels daily in 1923, but could not sustain itself 30 days above the 200,000 barrel level; and water encroachment cut its ultimate yield many millions of barrels. Notwithstanding that condition, Powell had produced an average of 39,513 barrels an acre from 2650 acres to Jan. 1, 1931.

Appearance of water, delimiting the Sabine Uplift producing area on the west, in Rusk and Gregg counties, will cut down the district's width and also decrease its ultimate yield through encroachment. Data are yet to be established, however, in both regards.

Structural conditions are different in the three general areas, but the Woodbine sand is the main pay in all of them; and water conditions back of the oil broadly similar.

The Mexia-Powell region fields produce from pay sands upthrown against a fault plane, which provides trapping for accumulations; the Sabine territory produces along an old Comanchean Cretaceous shoreline of a regional uplift; and Van is on a faulted uplift of local character in the northern part of the East Texas embayment.

Figures previously cited for Van represent those definitely applying to proved ground and those recognized for prorating purposes. Quoting from the

[1]National Petroleum News, Page 35, April 1, 1931, and page 47, April 8, 1931.

Hobbs Field Outlet to Be 36,532 Bbls.

HOUSTON, April 11.—Increase of Hobbs field allowable production to 36,532 barrels, effective May 1, was voted by operators in the southeastern New Mexico district at their advisory committee meeting held in Dallas, April 10. Shell Pipe Line Corp. will absorb all the increase amounting to approximately 4000 barrels daily.

The committee also voted final approval of the method of establishing potentials by gauging of wells through tubing, the capacity calculated on a proration curve basis. This method was first advocated to avoid damaging results of opening wells in the pool once each month to obtain potential gauges.

The oil field town of Van, southeast of the main devlopment in the new field in the Van Zandt county area, Texas

Pure Oil News, official organ of the Pure Oil Co., the Van field has a total area outlined to date for production of 4150 acres, or approximately six and a half square miles.

Its 220 feet average thickness of quartz sand compares with 20 to 30 feet of pay in a Woodbine section made up principally of shale at Mexia; and 50 to 60 feet of clean sand at Powell.

Ultimate yields are estimated from a low of 200,000,000 barrels to a high of 500,000,000 barrels, but the Pure Oil News inclines in its comment to the higher figure.

Drilling and production methods at Van are described as follows:

All wells are drilled with a rotary and usually take about 30 days, although some have been drilled in a much shorter time. A nine-inch hole is drilled to the top of the sand where seven-inch casing is set. Each well is equipped with valves and pipe connections above the derrick floor, in accordance with the best practice developed by the Pure's production engineers.

In addition to the flow valves through which the oil is produced, two recording pressure gauges are in evidence, one for taking the pressure in the casing, and the other in the tubing. Another important instrument is the thermometer, which is so placed that the temperature of the oil coming from the well can be read at any time.

After a well has been drilled into the sand and the liners have been placed in position, 2½-inch tubing is run to the top of the sand and the first flow that the well is allowed to make is run through this 2½-inch pipe. Usually, in order to clean the hole, it flows for a short time into a pit or sump and, as soon as clean oil appears, it is turned into the tanks, first passing through a gas separator. All this is done with so little bustle and excitement that a visitor to the field might pass one of these wells without knowing a new producer was being brought in.

In accordance with practice established in the unit block, all wells in the fields are given their first test through an 11/16-inch choke. This choke is essential a section of pipe inserted in the flow line giving an aperture 11/16 of an inch in diameter. The purpose of this restriction is to cut down the flow and bring in all the wells on the same basis.

All the wells are brought in through this size of opening, which is roughly the size of a ten cent piece, having a cross sectional area of .37 square inch. When reports show that a great many wells throughout the main part of the field come in for 100 barrels an hour or more through 11/16 choke, one is led to think of what these wells might produce if they were allowed to flow through the casing or through the large size connections found in other fields.

After preliminary testing on this choke, wells are further reduced and often choked down to openings as small as 1/16 of an inch, the majority being 8/64 or ⅛ of an inch. This is done so that the total production will not exceed the capacity of the pipe lines and have an equal distribution over the field.

Comparative Production Data on Ten Separate Woodbine Sand Oil Fields in East Texas

Field	Date Discovered	No. Producing Acres	No. Producing Wells	Crude Yield Per Acre	Total Prod. to Jan. 1, '31
Corsicana-Powell	1-7-23	2,650	423	39,513	104,708,919
Mexia	11-25-20	3,720	365	23,727	88,265,897
Wortham	11-22-24	715	66	30,933	22,117,286
Van	10-14-29	4,000*	187	1,920	7,680,795
Richland	Dec., 1923	240	17	27,263	6,543,116
Currie	Oct., 1921	375	29	16,748	6,280,584
Nigger Creek	7-8-26	170	30	17,408	2,959,444
Boggy Creek	3-21-27	1,000	24	2,499	2,499,150
Cedar Creek	8-24-27	25	7	11,701	292,522
Joiner	10-3-30	.....	5	.....	23,440
Kilgore-Bateman	12-28-30	.....	1	.....	800
Total		12,895	1,154	18,718	241,371,753

*Compilation figured on estimated productive acreage.

Union Oil Picks New Executives From Ranks

LOS ANGELES, April 10

FOLLOWING the elevation of R. D. Matthews to the executive vice presidency of the Union Oil Co. of California in February, as announced in the Feb. 18 issue of NATIONAL PETROLEUM NEWS, page 29, several changes have been made by him in the operating personnel of the company.

These include F. F. Hill, formerly manager of the field operations, who becomes director of production; V. H. Kelly, formerly manager of domestic distribution, who is now director of sales; William Groundwater, formerly manager of transportation, now director of transportation in charge of pipelines, tank cars, steamships, storage and marine equipment; and R. E. Haylett, who has been appointed director of manufacturing.

Another recent promotion went to A. C. Galbraith, who was elected assistant vice president. He has also been appointed managing director of the Atlantic Union Oil Co., Ltd. of Australasia, whose sales department he helped organize in 1927. Mr. Galbraith is also vice president of the Union Atlantic Co., holding company of the former. He has been with the Union company since 1915.

All of the men involved in these promotions have worked their way up from ordinary positions, their advancement being in line with the company's policy of promoting men from the ranks to positions of responsibility.

Mr. Hill began at 16 years of age as helper in a company warehouse at Santa Paula. Mr. Groundwater's first job 20 years ago was construction work on the pipeline of the Producers Transportation Co. at Creston, Cal. He worked as engineer at the Creston pumping station and was later placed in charge of mechanical equipment there. In 1922 he was made assistant manager of transportation and in the following year took charge of the department. Mr. Kelly's first work was in the sales department in 1913.

Mr. Galbraith entered the company through the comptroller's department. In 1922 when the advertising department was established, he was made head of it and in 1922 he went to Australia and New Zealand to establish the Atlantic Union company's sales department.

Frank F. Hill Director of Production
Union Oil Co. of California

R. E. Haylett Director of Manufacturing
Union Oil Co. of California

A. C. Galbraith Assistant Vice President
Union Oil Co. of California

William Groundwater Director of Transportation
Union Oil Co. of California

V. H. Kelly Director of Sales
Union Oil Co. of California

Properties and Structures of Paraffin Waxes and Ceresines

By Dr. A. N. Sachanen, Miss L. G. Zherdeva and A. N. Vasilyev

Part 1

THE accompanying article is the first of a series of four by these authors to be published in NATIONAL PETROLEUM NEWS. The second part will appear in an early issue.

WAX found in crude oil is made up of hydrocarbons belonging to the paraffin series. According to Engler and Zalozecki's[1] viewpoint which is accepted by quite a majority of chemists, crude oil paraffins can be regarded as normal hydrocarbons as well as hydrocarbons with an iso-structure. The latter are mostly present in the untreated crude oil and in the undistilled crude oil residues. According to Zalozecki, when distilling hydrocarbons of the iso-structure they are decomposed, forming normal hydrocarbons. Therefore distilled oils contain mostly normal paraffins which differ from the amorphous iso-paraffins by their crystalline structure.

Zalozecki's conception of amorphous and crystalline paraffins was criticized and checked experimentally by L. G. Gurvich[2], who came to the conclusion that amorphous paraffins differ from the crystalline structure only by the very small size of their crystals and that the difference in the behavior of the amorphous and the crystalline paraffins should be looked for in conditions which retard the crystallization of the paraffin contained in tarry undistilled products.

Gurvich's opinion was confirmed by investigations carried out by A. N. Sachanen and M. A. Bestuzhev[3] who investigated the solubility of proto-paraffins, i.e. paraffins separated from the untreated oil which was not subjected to distillation. This investigation showed that paraffins obey the same law of solubility of crystalline substances as do the proto-paraffins obtained by distillation.

It therefore can be considered as finally established that the crystalline structure of all paraffins contained in crude oils are identical and differ from one another only by the character of their crystals. This is far from solving the problem of the entire similarity of all paraffins present in crude oil.

It is known that paraffins separated from distillates differ greatly from ceresines separated from ozokerite without distillation not only by their crystalline structure but in other chemical and physical properties. Paraffins which separate from crude oil in reservoirs when stored, or in pipes during pumping are quite analogous to ozokerite ceresines and should have the same name.

In contrast to paraffins, ceresines hold the oil quite tenaciously and the latter can not be separated by filter presses or by the process of sweating. Chemically, the ceresine is less stable than is paraffin and reacts easily with fuming sulfuric acid and chlor-sulfonic acid. The latter fact according to Marcusson[4] confirms Zalozecki's opinion about ceresines, who classifies them as hydrocarbons of the iso-structure.

In this paper, solid crude oil hydrocarbons which can be removed in filter presses and which can be sweated we will call paraffins. Hydrocarbons which do not posses these characteristics independent from the method (distillation or raw products) of their preparation will be called ceresines.

The possibility of converting ceresine into paraffin when subjecting it to distillation can hardly be disputed. It is quite well known that a considerable amount of solid hydrocarbons is obtained in the form of paraffins when heating the oil strongly and carrying the distillation under severe conditions down to coke, even when the original product contained ceresines. This led to a certain opinion that a light cracking is of advantage when working towards a paraffin distillate for the manufacture of paraffin.

However, in the distillation. a conversion of ceresines into paraffins is never quantitative. Even in the severe conditions of a distillation down to coke a part of the ceresines is transferred into the distillates and causes some of them to become inconvenient for filtration and for sweating.

Our experiments in which we distilled ceresine in a cathode vacuum show that under these conditions ceresine can be distilled without decomposition. Ceresine separated from Surakhanui crude oil[5] with a melt-

[1]Engler-Hofer. Das Erdol. Vol. 1, p. 259-60.

[2]Sci. Found. Pet. Tech. London. 1926.

[3]Pet. Z.: *22*, 484 (1926); C. A.: *21*, 1179 (1927).

[4]Mitt. Kgl. Material-prufungsamt: *33*, 415 (1917); C. A.; *11*, 1290 (1917).

[5]Surakhanui crude from the Baku District has a specific gravity of about 0.850, contains about 15% gasoline and about 5% paraffin. The residues from this crude yield a fairly good bright stock. The cylinder stocks of these crudes are characterized by a very high cold test which is about + 45°C.

HAVE you ever seen a cut-away Tube-Turn? You can see *and measure* the difference for yourself!

Tube-Turns are neither bends, castings, nor stampings. They are forged, by a patented process, from seamless steel tubing. *They have uniform walls.* There is no thinning of outside walls—no thickening or buckling of inside walls—no flattening of cross-section.

Being forged and annealed, no internal stresses or strains are set up during manufacture—there is no tendency to distort or fail under heat or pressure. . .

Having uniform walls, and being made of the same material as the pipe in the line, they have the same coefficient of expansion and contraction . . . they resist corrosion . . . they are as strong or stronger than the pipe itself. Since there is no buckling or flattening, Tube-Turns cause less pressure-drop. . . Being free from flanges or shoulders, they weigh less, can be nested closer and are far easier to insulate. . .

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They are *stocked*, not only in 90° elbows, but also in 45° ells and 180° returns. They match Standard and Extra-Heavy I. P. S., respectively, in O. D., in I. D., and in wall thickness.

The standard radius of all stock Tube-Turns is 1½ times the nominal pipe size, which is the most practical radius for the reduction of pressure loss and for facilitation of designing and installation.

Tube-Turns are installed in the line with easy welds straight across the pipe. *They require no more rod, gas or labor than is consumed in the welding of straight pipe.*

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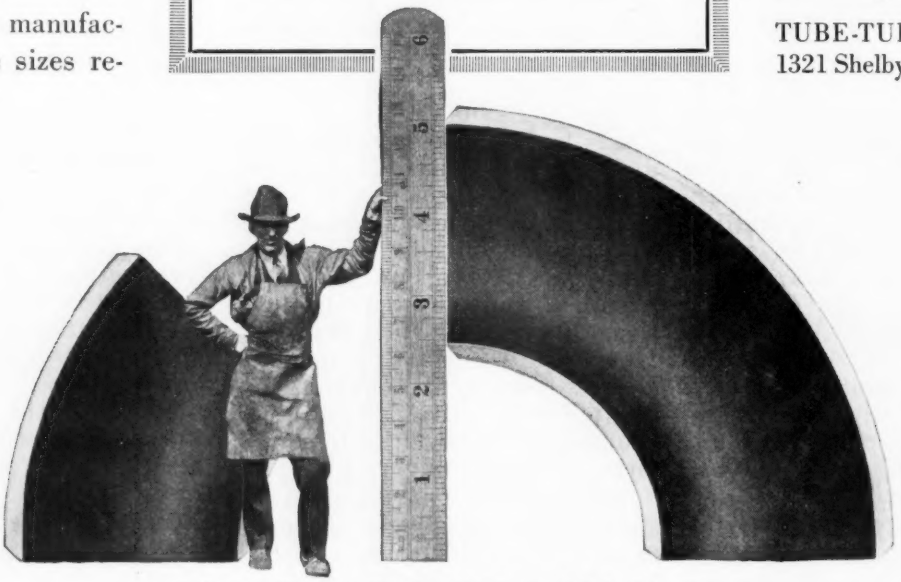

A 45° and a 90° cut-away Tube-Turn, 2½″ Standard I. P. S. Note uniform walls and freedom from buckling or flattening.

TUBE-TURNS

The Seamless Fittings for Pipe Welding

Table 1

	Melting point	Sp. gr. at 20°C.	Sp. gr. at 100°C.	Absolute visc. at 100°C.	Refraction at 100°C.	Nitrobenzene point	Molecular weight
Before distill.....	74°C.	0.932	0.787	0.0835	1.436	81.8°C.	569
After distill.....	74°C.	0.932	0.787	0.0803	1.437	81.4°C.	572

ing point of 74°C.[6] was distilled at a pressure of about 0.0003 mm. of mercury column whereby the temperature of distillate vapors reached 330°C. The results of this experiment are shown in Table 1.

Thus a distillation of ceresine in cathode vacuo took place practically without any decomposition. It should be noted that the small change in viscosity does not exceed the experimental error. Later on, in the description of the structure of ceresine we will return to the question dealing with the distillation of ceresines without decomposition in a cathodic vacuum.

However under more severe distillation conditions the phenomenon of ceresine decomposition and partial conversion into paraffins can be noticed. A ceresine with a melting point of 71°C. was distilled under a high vacuum at 1/2 mm. and was separated into two fractions. The properties of the original ceresine and of cerecines obtained in the distillation of fractions are given in the table below.

Properties of ceresines: Melting point 71°C., sp, gr, at 20°C. 0.932, ditto at 100°C. 0.782, absolute viscosity at 100°C. 0.0786, refractive index at 100°C. 1.437, nitrobenzene point 83.5°C. and molecular weight 639.

sine is decomposed in part, being converted into paraffin when distilling under high vacuum. The fractions, particularly the first ones are distinguished by a lowering of the refractive index and by lower nitrobenzene points, which latter fact indicates the distinction of paraffins from ceresines which will be explained later. However, the conversion of ceresines into paraffins during distillation is only partial, as is shown very clearly in the following experiment.

All fractions were combined and subjected to a repeated recrystallization from a gasoline-butanone mixture to remove the newly formed lower melting point and easier soluble paraffins. The residue amounting to 30 per cent of the ceresine having 71°C. melting point, after being dissolved had the following properties: melting point 76°C., specific gravity at 100°C. 0.780, absolute viscosity at 100°C. 0.0780, nitrobenzene point 78.6°C. and a molecular weight of 618.

The experiment showed that after a part of the newly formed paraffin is removed genuine ceresine is obtained, which is characterized by a high viscosity, high molecular weight and nitrobenzene point. Because the separation of ceresine was by no means quantitative the

Table 2

Distillation

Pressure mm.	Boiling point °C.	Yield fract. per cent	Melting point °C.	Spec. gr. at 20 °C.	Refrac. index	Nitroben. point °C.
2	289-310	8	72	0.930	1.429	67.2
1½	310-320	14	73	0.932	1.432	69.2
1½	320-331	16	73	0.933	1.429	71.0
1½	331-346	13	75	0.933	1.435	72.8
1	346-380	15	76	0.935	1.437	77.5
1	380-418	29	73	0.919	1.441	82
Residue	.....	2	63	.....	.....	.....
Loss	.....	3	....	.....	.....	.....

The data presented in the table clearly indicate that ceresine is decomposed in part, being converted into paraffin when distilling under high vacuum. The fractions, particularly the first ones are distinguished by a lowering of the refractive index and by lower nitrobenzene points, which latter fact indicates the distinction of paraffins from ceresines which will be explained later. However, the conversion of ceresines into paraffins during distillation is only partial, as is shown very clearly in the following experiment.

conclusion can only be drawn that a vacuum distillation causes a slight decomposition of ceresines and their conversion into paraffins.

Thus we arrived at a very important conclusion, namely, *that ceresines can be distilled without decomposition, that during distillation they are decomposed and transformed into paraffins but only in part.*

If paraffins are obtained when distilling ceresines, what then is their origin? Are they not obtained entirely as a result of the decomposition of ceresines present in the crude oil?

The experiments just described showed that ceresines as a rule are not so easily decomposed at elevated temperatures within ranges exceeding 300°-350°C. A distillation in a cathode vacuum at a temperature of 300°-350°C. showed almost negligible decomposition of ceresines. Experiments made with distillation of topped paraffin base crude oil at a high vacuum show that the distillation of paraffin takes place at low temperatures which are considerably below 300°C. Distillates of many paraffin base crudes which distill over at about 200°C., congeal at 0°C. and contain a noticeable amount of paraffin. The entire paraffin obtained on refinery scale distills in a high vacuum at 5-10 mm. below 300°C., i.e. at a temperature excluding a decomposition of ceresine.

Thus we arrived at a second fundamental conclusion which is as follows: *Paraffins are contained as such in crude oils and are distilled over with oil fractions of the corresponding boiling points.* A new formation of paraffins from ceresines can take place only at higher distillation temperatures and at usual refinery conditions it is not of any importance.

Consequently untreated crude oils contain ceresines as well as paraffins in various properties. Therefore, using the same analytical method, for the paraffin determination, two crudes can show different amounts of commercial paraffins. Thus among the Russian crudes, the crude from Grozny produces a high amount of paraffin which begins to distill over at once with the light gas oil fractions.

The crudes from Pennsylvania and Mid-Continent mixed base crudes apparently also belong to this type, and are char-

[6] On the thermometer bulb. The Galician method.

[7] Critical temperature of solubility of ceresine in nitrobenzene.

Table 3

Properties of Ceresines from Surakhanui Crude Oils

1) Ceresine fractions separated from petrolatum from heavy residuum.

No. of exper.	Melting point on thermom. bulb	Melting point	Specific gravity hydrostatically at 20°C.	Specific gravity by flotation method	Specific gravity at 100°C.	Absolute viscosity at 100°C.	Nitrobenzene point	Refractive index	Penetration at 25°C.	Elementary composition % H	Elementary composition % C	Molecular weight At different concentrations			Molecular weight Average	Formula	Notes
1	85		0.940	0.941/20°	0.785	0.101	89.1°C.	1.4368	5.5	14.58	85.41	738	736.6	749.8	741	$C_{53}H_{108}$	
2	80.5		.....	0.933/21°	0.785	0.0823	84.8 "	1.4354	6.5	14.58	85.51	672	671.5	669.9	671	$C_{48}H_{98}$	All
3	71	70.1	0.932	0.927/20°	0.782	0.0786	83.5 "	1.4369	11	14.47	85.49	656.6	640.5	636.9	639	$C_{45}H_{92}$	cuts
4	68	66.2	0.930	0.925/21°	0.784	0.0725	80.4 "	1.4372	14	14.46	85.53	619.8	614	607	614	$C_{44}H_{90}$	are
5	63.5	62.2	0.928	0.926/18°	0.787	0.0794	82.7 "	1.4370	....	14.48	85.45	619	602	604	608	$C_{43}H_{88}$	narrow
6	57.5	57.2	0.925	0.921/21°	0.785	0.0729	79.3 "	1.4375	....	14.47	85.45	598	595	589	592	$C_{42}H_{86}$	cuts.

2) Ceresine fractions separated from petrolatum from long residuum.

1	74		0.931	0.932/20°	0.787	0.0835	81.8°C.	1.4359	10.5	14.55	85.47	517	566	573	569	$C_{40}H_{82}$	Wide
2	66.5			0.925/19°	0.783	0.0665	77.6 "	1.4369	12	14.65	85.49	542	535	555	544	$C_{39}H_{80}$	cuts
3	65.5		0.932	0.928/20°	0.784	0.0793	80.5 "	1.4412	....	14.59	85.40	535	551	553	546	$C_{39}H_{80}$	———
4	61.5	61.3	0.929	0.925/20°	0.788	0.0852	82.2 "	1.4423	23	14.58	85.42	586	621	603	603	$C_{43}H_{88}$	Narrow
5	56	55.1	0.925	0.918/20°	0.786	0.0642	75.1 "	1.4359	....	14.58	85.41	524	518	533	525	$C_{37}H_{76}$	cuts

The preparation of pure ceresines is for this reason a much more complicated problem than the preparation of paraffins. Simultaneously the addition of oil to ceresine exercises but little influence on the physical properties of ceresines and particularly on their melting point. The following data obtained by the authors show the influence of oil on the properties of ceresines. Bright stock of E_{100} 3.4 viscosity was added to ceresine of 83° C. melting point.

acterized by a prevalence of paraffins. The case is reversed with the Surakhanui crude which gives up a very small amount of paraffins with the distillates. These paraffins are distilled over in much larger quantities with the heavy oil fractions together with the ceresines, whereby the major part of the ceresines is concentrated in the residue.

This distinction between the Grozny paraffin base and the Surakhanui crude is due to the prevalence of paraffins in the former and of ceresines in the latter.

Thus our conclusions differ greatly from those of Buchler and Graves[8] who found, that in all the Salt Creek crude oil products they investigated, namely slop wax distillates, petrolatums, sediments in pipes, always the same paraffin is obtained.

Such a conclusion from the above authors is due, in part, to the fact that they obtained the paraffin and ceresine fractions by distillation in high vacuo which causes a slight decomposition of the ceresines and lowers the refractive index and molecular weights as was shown above, and partly by the character of the Salt Creek crude oil which evidently contains mostly paraffins, while on the other hand they did not separate the light ceresines which differ greatly from paraffins of the same melting point. (See Table 3).

It should be noted that a quantitative determination of paraffins and ceresines separately is very difficult as will be explained later.

Furthermore, as will be shown later, the major part of ceresines is of the high melting point variety; they are hydrocarbons almost unsoluble in crude oils. These ceresines can separate from crudes under various more or less favorable conditions and can accumulate in the form of ozokerites. Therefore, ozokerites contain mainly ceresines, while the lower melting point and more soluble paraffins as a rule are not precipitated under conditions promoting the formation of ozokerites. High melting point paraffins can also precipitate under conditions favoring the formation of ozokerites and be present in the latter together with ceresines.

[8]Ind. Eng. Chem.: *19*, 718-24 (1927); C. A.: *21*, 2554 (1927).

Sinclair Made Chairman Of Rio Grande Board

CLEVELAND, April 13.—Harry F. Sinclair, chairman of the board of directors of Sinclair Consolidated Oil Corp., April 13 was elected chairman of the board of the Rio Grande Oil Co. at a Rio Grande meeting in El Paso, Texas. It was stated at Sinclair headquarters in New York that Mr. Sinclair's election to the Rio Grande board is not a consolidation arrangement although Sinclair has been given an option to buy Rio Grande stock in the future.

Other new members of the Rio Grande board are H. H. Rogers, president of the Exchange National Bank of Tulsa; R. W. Millar, president of Bancamerica Corp. of California, and Robert B. Cavanaugh, a representative of the Bancamerica-Blair Corp. which last year headed a syndicate that underwrote a $5,000,000 credit to Rio Grande.

L. E. Lockhart, one of the brothers who developed Rio Grande from a jobbing company in El Paso into an integrated company with approximately $50,000,000 of assets, remains as president of Rio Grande. L. M. Lockhart remains as vice-president and secretary, and Charles S. Jones as vice-president and treasurer. These men and Harry Dunnigan, attorney for Rio Grande, also are members of the Rio Grande board.

Under the new set-up of the Rio Grande board the Sinclair and the Bancamerica interests will get an opportunity to see if a merger would work to the advantage of both the Rio Grande and Sinclair companies. For the present, however, there will be no interlocking of activities, it is said. No new financing for Rio Grande is planned.

We can't control the price of crude oil nor fix the price of gasoline

But we can crack more fuel oil

That will help solve the crude problem Prices will take care of themselves

Dubbs cracks anything from kerosene to heavy crude Dubbs cracking makes best gasoline

The Dubbs process thrives on oils that otherwise mean loss

The automobile engine thrives on Dubbs gasoline

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Chicago, Illinois

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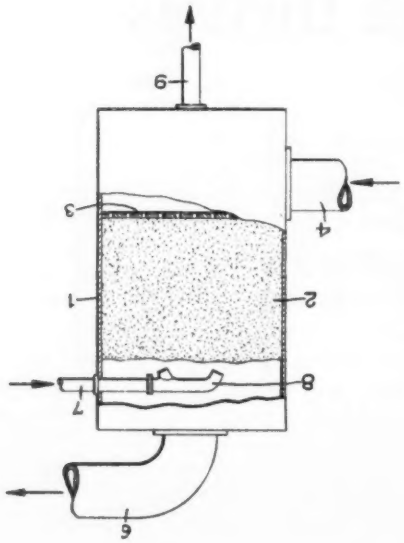
New Refining Patents

Polymerizing Hydrocarbons. U. S. P. 1 792 877, Feb. 17, 1931, June 7, 1928; William M. Stratford, Assignor to the Texas Co.

IN THE use of fullers earth or like solid absorbent catalysts for removing unsaturated compounds from gasoline distillates by polymerization, the catalyst is quickly poisoned by the condensed polymerized products, so that frequent regeneration is necessary. If a large body of catalyst is employed to minimize the frequency of renewal, the polymerizing effect is too vigorous, so that harmless or even desirable unsaturated compounds are removed along with the undesirable compounds.

As a means of avoiding both these sources of loss, it has been found that the activity of a body of catalyst can be maintained by continuous washing with a solvent for the condensed polymers, so that the operation can be made practically continuous and it is not necessary to use an unduly large body of catalyst.

An apparatus for this purpose is shown in the drawing. The catalyst 2 rests on a perforated plate 3 in the container 1, through which free flow of vapors is possible, in contact with the catalyst. Unpurified vapor from a still enters at 4 and rises through the catalyst, the more highly unsaturated components being polymerized and condensed on the catalyst surface. The purified vapors pass on through 6 to a condenser. A solvent of the polymers, entering through the pipe 7, is distributed by the spray 8 over the catalyst. It washes out the polymers, and the resulting solution is withdrawn continuously at 9, for return to the still or for separate treatment.



What is Claimed

Partial separation from hydrocarbon oils of unsaturated compounds in the same boiling range, by polymerization to higher boiling compounds, by continuously contacting the vaporized oil with a solid absorbent catalyst and intermittently washing therefrom absorbed polymers by a solvent therefor, supplied from an extraneous source.

* * *

Electrical Discharge Cracking Processes. U. S. P. 1 792 744, Feb. 17, 1931, application filed July 22, 1924; Jay J. Jakowsky, Assignor to C. & C. Developing Co.

IN THOSE cracking processes in which high tension or corona discharges have been employed hitherto, the idea has been that the discharge set up molecular vibrations of sufficient intensity, or exerted an effect analogous to electrolytic action, to effect the desired decomposition. In the present invention, on the other hand, the electric discharge is employed rather to set up an "electrical wind," in a chamber in which thermal cracking conditions prevail; the idea is to facilitate thermal decomposition by the discharge, not to rely on the discharge as the active cracking influence.

The new process is based on the discovery of this "electrical wind" effect, by which the discharge notably increases the efficacy of a thermal cracking treatment. It does this by directing the oil vapor particles against the hot walls of the cracking chamber; thus it exerts an effect similar to that of greatly increasing the effective heating surface.

Previous attempts to obtain this effect, e.g. by filling the chamber with a packing material, have failed on account of stoppage due to accumulation of carbon or coke deposits. Since the discharge acts only on vapor particles (oil fog or mist), it allows the true gases (volatile components) to pass unchanged, but exerts its effect on the particles of uncracked heavy hydrocarbons, which otherwise tend to escape unchanged.

In the new process the accelerating effect of the electrical discharge is such that a moderate heat may be employed; thus overheating of the cracking chamber is avoided. As an added advantage of this feature, the gasoline produced according to this invention has a much lower concentration of unsaturated compounds than gasolines made by the usual vapor phase cracking processes.

What is Claimed

Cracking heavy oils by vaporizing in such a way that a substantial part of the vapor is in the form of a non-gaseous and saturated vapor, which is subjected, while in operative proximity to a surface heated to a cracking temperature, to the precipitating action of a high tension silent electrical discharge to drive the non-gaseous portion of the vapors toward the hot surface, and withdrawing the uncondensed products for gasoline recovery.

* * *

Sweetening Petroleum. U. S. P. 1 794 668, March 3, 1931, application filed May 1, 1928; Warren F. Bleecker.

THIS invention relates to a process of intimate admixture of petroleum with an oxidizing gas under pressure, to remove or neutralize the sulfur compounds and thereby render the oil non-corrosive.

The preferred gas for the treatment is chlorine, or one of its oxides, in the nascent state; the activity of such gas is such that its action is rapid enough for a continuous process. The gas is generated by electrolysis of a chloride brine in contact with the petroleum, the system being kept under sufficient pressure (about 5-10 lb. per sq. in.) in excess of atmospheric pressure to facilitate the required intimate contact of gas with liquid.

The new process can be used to treat oil in the field, so that it will not corrode storage tanks. No special procedure is required to separate the treated oil, since the liquid brine is not mixed with nor emulsified in the oil, and the gas remaining in the oil after the sweetening process readily passes off to the atmosphere. The pressure effect is easily obtained by suitable confinement of the gases formed in the electrolysis. The hydrogen which is produced is not allowed to mix with the oil. The new process is applicable to crude oil, or to its distillates, such as gasoline.

What is Claimed

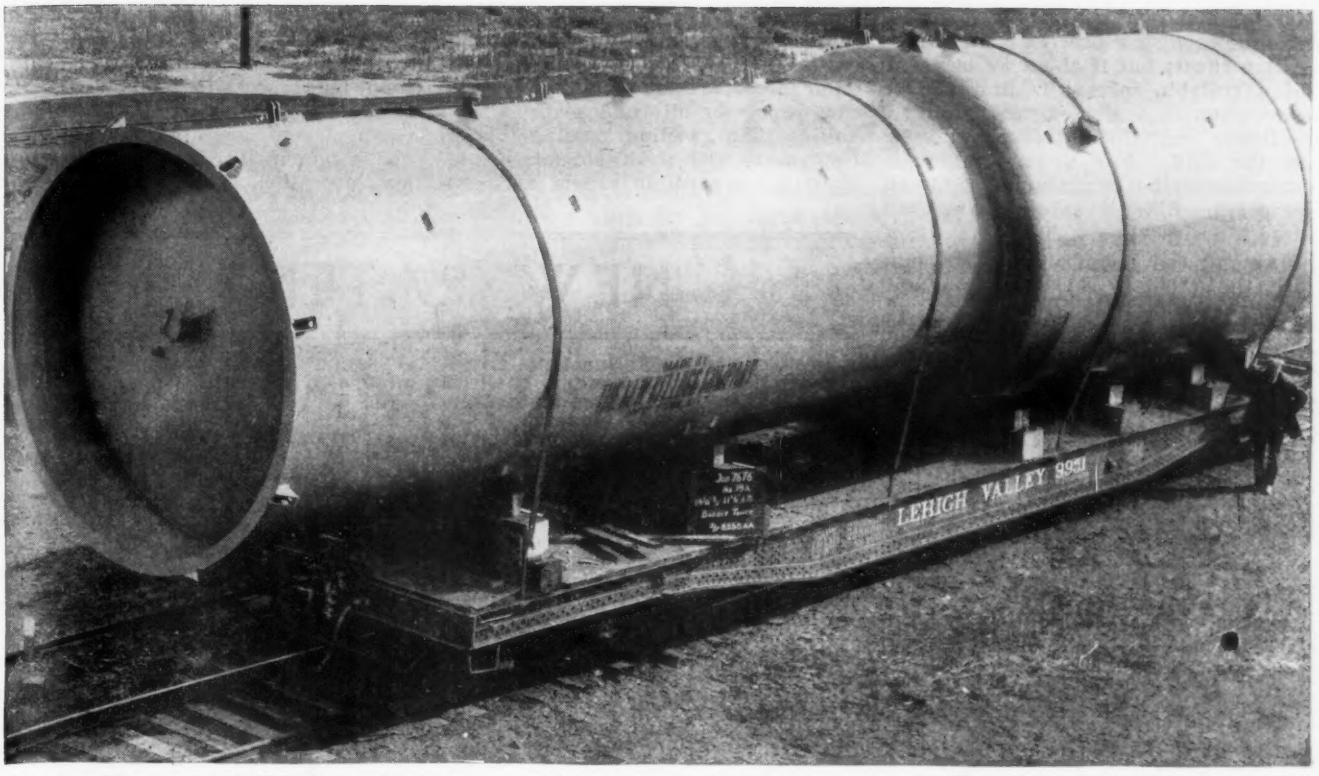
Removing corrosive sulfur compounds from oil by electrolyzing brine in presence of the oil, passing the nascent chlorine directly into the oil, and separately removing hydrogen gas without introducing it into the oil.

* * *

Separating Oils from Solids. U. S. P. 1 794 865, March 3, 1931, application filed Aug. 17, 1928 and in Germany Oct. 25, 1927; Mathias Pier, Rudolf Wietzel and Bruno Engel, Assignors to I. G. Farbenindustrie Aktiengesellschaft.

IN VARIOUS processes used in the oil industry, such as cracking and destructive hydrogenation of mineral oils, tars and the like, mixtures of heavy oils with solid impurities (carbon, charred residues, spent catalysts and the like) are encountered, and it is often difficult to separate the oil from such solids.

It has now been found that such mixtures can be effectively separated by centrifuging in the presence of liquids which are solvents for the oil which it is desired to recover. Centri-



A Kellogg Masterweld Bubble Tower. Dimensions are 14-ft., 0-in. and 11-ft., 6-in. inside diameter by 58-ft. long. Weight 134,860 pounds.

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fuging alone is much less effective, sometimes giving practically no separation effect; but if about 30 per cent of a suitable solvent is first added, separation is easily effected with an ordinary centrifuge, sometimes even in the cold. For a very thorough separation, the centrifuging may be repeated, a different solvent being then used if desired.

Among the most suitable solvents are the aromatic hydrocarbons and their hydrogenation products, e. g. benzene, toluene, xylene, tetralin; and the chlorinated hydrocarbons, e. g. chloroform, methylene chloride and the like. As compared with extraction methods, the solvent requirement of this method is very small. Some mixtures are more easily separated if a wetting agent, e.g. alklyated aryl sulfonic acids or a like substance, is also added.

What is Claimed

Recovering oils from mixtures with solids, by centrifuging in presence of aromatic hydrocarbons which are solvents with respect to the oil.

* * *

Combined Cracking and Refining. U. S. P. 1 795 067, March 3, 1931, application filed Sept. 14, 1928; Frank A. Apgar, Assignor to Sinclair Refining Co.

A NEW process has been developed in which vapor phase cracking of heavy oils, under severe conditions, is combined with vapor phase catalytic purification of the resulting gasoline. In prior practice, such combined treatments have been hampered by difficulties caused by rapid deterioration of the adsorptive catalyst. This necessitated frequent renewal of the catalyst, resulting in loss of operating time and in excessive catalyst costs.

The new procedure greatly prolongs the life of the catalyst, thus making possible much longer periods of uninterrupted operation. This is accomplished by providing means for passing through the bed of catalyst a washing agent, comprising an oil condensate, higher-boiling than gasoline, derived from the raw vapor effluent from the cracking operation, and free from entrained tarry matter. This condensate may be passed through the catalyst at intervals, or continuously, or at a low rate continuously, with periodic flushing at a faster rate to flush out the condensed polymers which tend to choke the catalyst and impair its efficiency.

The oil condensate, above described, is particularly advantageous as a washing agent, because it is highly effective in maintaining catalyst life, and it is easily and inexpensively obtained from the cracking operation itself, and easily separated from the gasoline distillate after the treatment.

What is Claimed

In the combined cracking of oil and refining of the gasoline in vapor phase over an adsorptive catalyst, the improvement which comprises scrubbing the raw vapor from the cracking operation proper, to remove unvaporized oil or tar, separating from the scrubbed raw vapor an oil condensate higher-boiling than gasoline, passing this oil condensate with the vapor mixture including the gasoline vapors to be refined through the adsorptive catalyst, the oil condensate acting as a liquid washing agent, separating the washing agent and associated liquid polymers from the refined vapor mixture and introducing the separated washing agent and polymers directly into the scrubbing operation.

NEW PATENTS

Prepared by R. E. Burnham, patent and trade-mark attorney, 1343 H Street, N. W., Washington, D. C., from whom copies may be obtained at the rate of 20c each. State number of patent and name of inventor when ordering.

March 17, 1931

MISCELLANEOUS

Method of treating lubricants—William O. Stevens, Detroit, Mich., assignor to Anti Hot Box Co., Princeton, Ill. No. 1,796,310.

Lubricant—Daniel P. Barnard, Whiting, Ind., assignor to Standard Oil Co. of Indiana. No. 1,796,857.

Tank vehicle—James J. McMahon, Forest Hills, N. Y., assignor to American Car & Foundry Motors Co., New York, N. Y. No. 1,797,217.

March 24, 1931

REFINING

Art of refining hydrocarbons. Frank A. Apgar, Hammond, Ind., assignor to Sinclair Refining Co., New York, N. Y. No. 1,797,255.

Art of refining hydrocarbons. Eugene C. Herthel, Chicago, Ill., assignor to Sinclair Refining Co., New York, N. Y. No. 1,797,262.

Method of treating petroleum oils. Cornelius B. Watson, Chicago, Ill., Chicago, Ill., assignor to Gyro Process Co., Detroit, Mich. No. 1,797,305.

Method of refining. Rudolph C. Osterstrom, Chicago, Ill., and Robert C. Tucker, Muskogee, Okla., assignors to Pure Oil Co., Chicago. No. 1,797,513.

Distillation of hydrocarbons. Irving C. Carpenter, New York, N. Y., and Arthur R. Moorman, Tulsa, Okla., assignors to Contact Filtration Co., San Francisco, Calif. No. 1,797,715.

Treatment of liquid hydrocarbons. Samuel J. Manson, Auld, Albert E. Dunstan and Percy H. Herring, Sunbury-on-Thames, England, assignors to Anglo-Persian Oil Co., Ltd., London, England. No. 1,798,054.

PRODUCTION

Pipe-hoister for pumps. Francis E. Prockish, Westmoreland, Kans. No. 1,797,482.

Adjustable fourble-board and spring-tension finger for drill-derricks Imon F. Bailey, Long Beach, Calif. No. 1,797,492.

Releasing overshot. Fred Jones, Henry Schwab, and Charles P. Skinner, Ventura, Calif. No. 797,505.

Core-catcher. Rex G. Hamaker, Houston, Tex., assignor to Reed Roller Bit Co., same place. No. 1,797,550.

Automatic pipe-puller. Robert D. Brandon, Sulphur, La., No. 1,797,632.

Drill-bit. Anthony E. McLean, Fullerton, Calif. No. 1,797,690.

Deflection-recorder. Walter E. Cummins, Santa Maria, Calif. No. 1,797,943.

Tubing-slip. Louis M. Pearce, Houston, Tex., assignor to Texas Iron Works Sales Corporation, same place. No. 1,797,964.

MISCELLANEOUS

Extension-spout oil-can. Milton L. Baker, San Rafael, Calif., assignor to Standard Oil Co. of California. No. 1,797,676.

Manufacture of non-detonating motor-fuels. Arthur B. Brown and Frederick W. Sullivan, Jr., Whiting, Ind., assignors to Standard Oil Co. of Indiana. No. 1,797,819.

Liquid-dispensing apparatus. Earl E. Eickmeyer, Dayton, Ohio, assignor to National Pumps Corporation, same place. No. 1,797,947.

Apparatus for reclaiming waste lubrating oils. Stanley Pipkin, Lutesville, Mo. No. 1,798,031.

March 31, 1931

REFINING

Production of hydrocarbons of high-boiling-point range—Rudolf Wietzel and Walter Speer, Ludwigshafen-on-the-Rhine, and Hans Kaehler, Oppau, Germany, assignors to I. G. Farbenindustrie. No. 1,798,288.

Apparatus for treating hydrocarbon oils—Edward E. Stewart, Wichita Falls, Tex. No. 1,798,338.

Treating petroleum oils—Pierce M. Travis, Ridgewood, N. J., assignor to Travis Process Corporation, Jersey City, N. J. No. 1,798,341.

Oil-purification process — Frank M. Clark and Arthur T. Harding, Pittsfield, Mass., assignors to General Electric Co. No. 1,798,938.

PRODUCTION

Pump-plunger structure — John A. Yerkes and Rees H. Lemmon, Long Beach, Calif. No. 1,798,294.

Inserted pump-barrel and sealing means—John A. Yerkes and Rees H. Lemmon, Long Beach, Calif. No. 1,798,295.

Sucker-rod elevator—John A. Yerkes and John G. Bouslog, Long Beach, Calif. No. 1,798,296.

Auxiliary liner—Frank E. Crotto, Tulsa, Okla., assignor to Western Supply Co., same place. No. 1,798,311.

Jar for drilling operations—Lewis W. Newsom, Los Angeles, Calif. No. 1,798,337.

Jarring tool—Ira J. McCullough, Huntington Park, Calif. No. 1,798,480.

Drive mechanism for rotary drill-pipe—Erd V. Crowell, Los Angeles, Calif. No. 1,798,523.

Method and apparatus for recovering pressure gas from oil-wells—Louis N. Yates, Greenwood county, Kans., assignor to Sinclair Oil & Gas Co., Tulsa, Okla. No. 1,798,774.

Well-pumping head—Glenn H. Bowlus, Alhambra, Calif. No. 1,798,780.

Steam control of rotary feeding means (for automatically controlling the feed of a rotary well-drilling bit)—Philip Jones and Paul W. Prutzman, Los Angeles, Calif. No. 1,798,797.

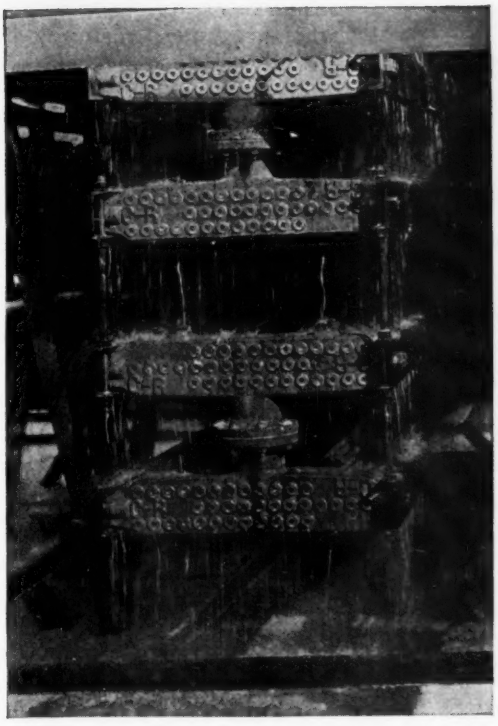
Pumping-jack — Henry M. Jarvis, Winfield, Kans. No. 1,799,015.

Well-shooting device—Jesse J. Hill, Independence, Kans. No. 1,799,046.

MISCELLANEOUS

Coin-operated liquid-dispensing apparatus—Drue A. Haley, Maplewood, Mo. No. 1,798,466.

Liquid-dispenser—William J. Peter, New York, N. Y., assignor to Aqua Systems Inc., same place. No. 1,798,805.



When cooling water forms scale

. . . these G-R Bentube Sections will maintain their rated capacity continuously without requiring hand cleaning. Their patented construction of tubes set with an initial curvature into headers provides a variation of flexure with change in temperature that continuously flakes off scale during normal operation.

G-R Bentube Sections are standard and interchangeable, readily transported, assembled and demounted. They are daily demonstrating their unique advantages in gasoline plants with a total capacity of over 4,000,000 gal. per day and are also widely used in refinery cooling and condensing operations.

The G-R Bentube Section is patented and it is our intention to prosecute all infringements. Infringement suits have already been filed in two instances.

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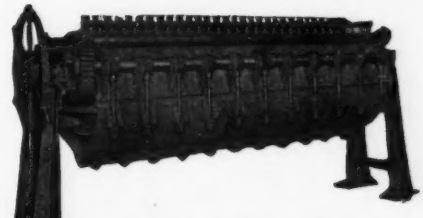

THAT old adage—"an ounce of prevention"—cannot find a better application than in connection with the shipment of lube oils.

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Demand for Coke at Atlantic Plant Greater Than Supply

CLEVELAND

DEVELOPMENT of a local market for petroleum coke until the demand is considerably greater than the supply of coke produced at the refinery, came almost overnight to the Atlantic Refining Co. at Philadelphia. Like Topsy this market "jes' growed."

Like a large number of refiners the Atlantic Co. has for years produced a considerable amount of coke from refining operations, and likewise the disposal of this material, profitably and regularly, often presented more or less of a problem to the sales department. Low volatility and friability of the fuel caused customers unacquainted with it to shy away from its use, as being troublesome, uncertain and an unknown quantity.

This condition has changed until the total number of dealers who were obtaining coke from this refinery alone numbered in the neighborhood of 200, mostly small dealers, truck drivers who sold their purchases in small lots in the city nearby.

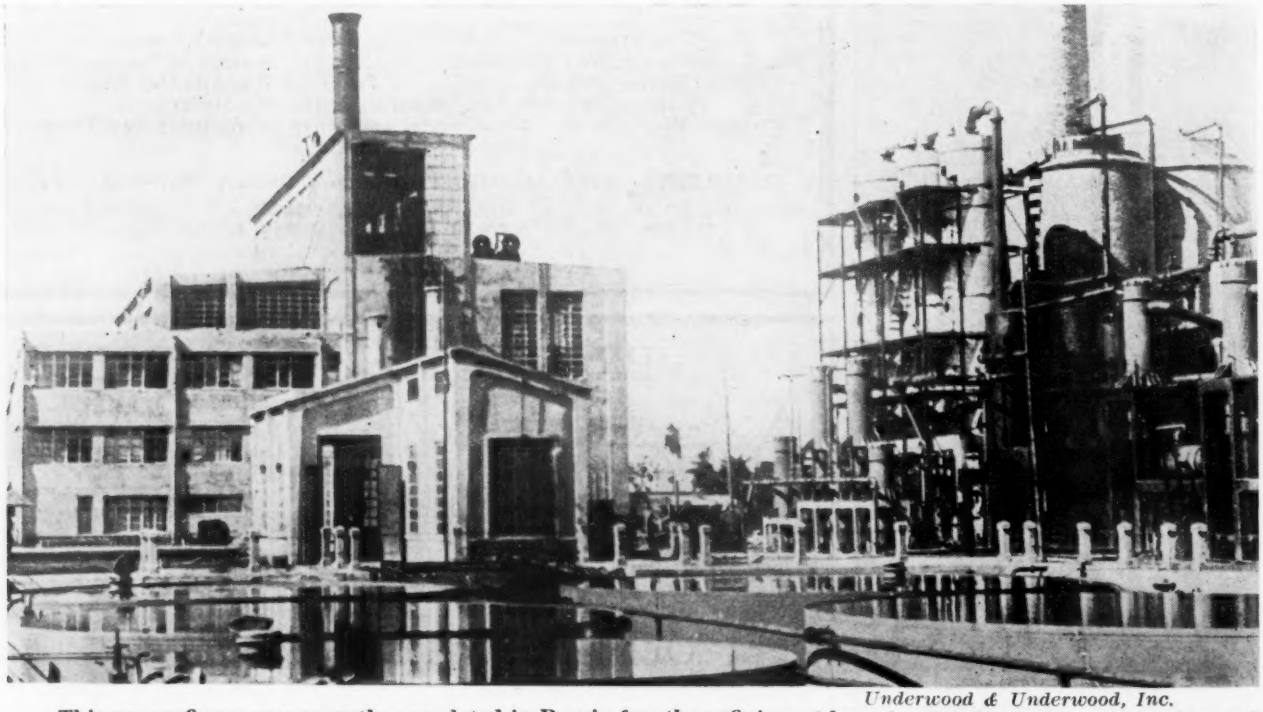
In fact the demand for coke became so much greater than the supply that this list of 200 was sometime ago reduced to 65, since the plant was totally unable to supply the needs of the entire group. H. M. Nichols, refinery manager for the Atlantic plant, recently stated that they have found it necessary to reduce this number still further.

It appears that the bakers of Philadelphia and vicinity first began to use this fuel in baking ovens, during a fuel shortage some time ago. During a later coal shortage, independent truckmen, who had delivered coke to the various bakeries. began to maket it in small lots to the less fortunate families in the city. Its use spread rapidly, the company aiding in the expansion of the market and in acquainting the public with the value of the "new" fuel for domestic purposes.

The coke handling problem assumed such proportions that the company arranged scales for weighing shipments at the coke yards, and placed a regular staff man in charge to handle the sales to truckers at the plant. As now handled, retail trucks weigh in "light" on entering the yard, are loaded with the desired amount of coke, and weigh out again on leaving the plant.

Scales are arranged, along with driveways so that a line of trucks are handled in the same direction through the yard without turning about, and without congestion. More than one exit is arranged so that the purchaser may leave the plant in the direction most advantageous to his destination.

To simplify handling the sales, the company, according to statements by H. M. Nichols, plant manager, recognized purchasers are sold "scrip books," to be used in paying for loads. When the net weight of a load is calculated at the scales, the truckman pays the designated amount of scrip from his book and the transaction is closed. Such a plan simplifies bookkeeping and reduces the number of employes on the coke handling job, with a minimum of overhead expense for the satisfactory disposal of what has been for years almost a waste material in many refining plants.



Underwood & Underwood, Inc.

This new refinery was recently completed in Russia for the refining of kerosine for domestic consumption and for export, by the Soviet Government. Its capacity is 30,000 tons annually, or about 600 barrels per day of finished kerosine from Russian crude. It was constructed by American builders.

Avoid Marketing Fires by Teaching Employes What May Cause Them

By H. N. Blakeslee*

SERVICE station salesmen, truck salesmen and bulk plant operators should know and remember the nature of the product which they are handling so that costly accidents and fires may be avoided.

Companies can install the best and almost fool-proof equipment which cannot in itself start a fire or injure a person, but the acts of individuals can involve the equipment in both accidents and fires.

The experience of a number of companies has demonstrated that best results in the prevention of accidents and damage to property can be obtained by instructing service station salesmen, truck salesmen and plant operators in the correct and safe way of doing their work. The uniformed and uninstructed sales employee is the one most liable to cause injury to himself and others or to allow a fire to get started at his station.

Service station salesmen should know that mixtures of gasoline vapor in air can be ignited when the amount of gasoline vapor present in the air lies between definite limits called upper and lower explosive limits. These limits are generally between 1.5 and 6 per cent by volume of gasoline vapor in air.

The range between these limits is known as the explosive range and a violent explosion will occur if any such mixture becomes ignited. A mixture containing more vapor than the upper explosive limit mixture can be ignited only when it issues into the open air. Here the gas stream may burn as a torch, but no explosion inside the tank will result. Most automobile motors operate on a mixture of about 2 to 2.5 per cent gasoline vapor in air.

Gasoline vapor is invisible and is heavier than air and may stratify close to the earth's surface. An explosive mixture may exist within a foot of the ground and not exist at the height of a man's head.

A customer once drove in at a service station and requested that his tank be filled. He stepped to the front end of his car, lighted a cigarette and threw the burning match down. A gentle wind was blowing from the rear toward the front end of the car.

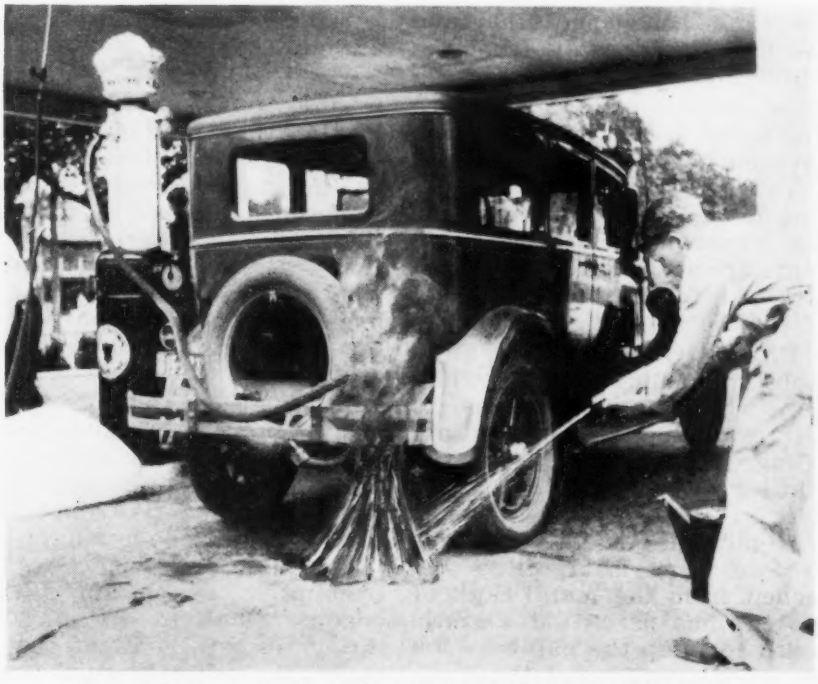
The gasoline flowing into the tank forced the vapor out of the tank and the breeze carried it under the car toward the front. When this vapor air mixture encountered the burning match, a flash occurred causing the customer to lose his car and doing considerable damage to the service station.

Recently a customer had difficulty with his vacuum tank and detached the gasoline line from it causing a small spill of gasoline. He had a lighted cigarette in his mouth but did not realize the gasoline vapor present could be ignited. As he inhaled from the cigarette a flash occurred severely burning him about the face and hands.

It is up to the service station operator to keep close watch of patrons at a service station and should they produce a cigarette, cigar or pipe he should immediately request them to refrain from smoking until after leaving the station.

Closed cars with the gasoline tank under the front seat should be well ventilated; that is, doors and windows opened during the filling operation so that the vapor driven out of the tank by the inflowing gasoline may drift away and be dissipated in the air. Fires are on record which have been caused by lighting a cigarette in a

*Safety Engineer, American Petroleum Institute.



Leave the hose in the tank and attack the fire at the base

Know that you are delivering the right product. Note the faucet markings

closed car of this type after the tank had been filled and the car driven away from the station.

In one case a lighted lantern was being used in the rear compartment of the automobile for a car heater. While the car was being filled with gasoline the vapor flashed. Such accidents are allowed to occur from lack of information on the part of service station salesmen.

Fires have occurred at automobile gasoline tanks while they were being filled, due to failure to stop the motor before filling, hot carbon from the muffler causing the vapor to flash.

Holding the metal nozzle of the gasoline filling line detached from the metal tank of the car has permitted a static spark to jump the gap between the metal nozzle and the automobile tank, thereby igniting vapors. The metal nozzle should be kept in contact with the automobile tank.

When such a fire starts, the mistake is frequently made of jerking the gasoline hose away from the tank, spilling gasoline on the ground, over the car, or sometimes on the clothing of the patron or other service station salesmen thereby making what should have been a simple fire to extinguish, one extending over considerable area and difficult to extinguish.

In such cases the hose should be left in the tank and the extinguisher fluid directed at the base of the flame until it is brought under control. Such fires can also be extinguished if burning only at the tank opening by smothering with a coat or blanket. Dirt or sand thrown forcefully at the base of the flame will extinguish small fires.

A truck and service station were badly damaged by fire caused when a truck driver used his pliers to make contact between his battery terminals to test the battery for a spark while his gasoline tank was being filled. The gasoline tank was in the cab of the truck, the door of the cab on the driver's side was open and the battery was located on the running board just outside of the cab door. The vapor driven out of the tank drifted out of the cab and the right mixture was present at the battery just as the contact was made with the pliers between the terminals of the battery.

A common source of injury to service station salesmen and patrons at service stations is catching fingers in the jamb of car doors. The service station salesman should make it a practice to keep his hands out of the door jamb and should always observe that no fingers are where they can be caught before closing the door on the customer's car.

In giving tire service, it is not necessary for the service station salesman to get down close to the tire with his face. He can place the air line nozzle on the valve stem and keep the fender of the car between himself and the tire. In this position his eyes and ears are not exposed to flying particles. Should a tire blow out, the fender is his protection and only his forearm is exposed to injury.

The accident problem in traffic on streets and highways is more difficult to control than in service stations, as the truck salesman has no direct contact with the drivers of other cars. However, the companies which keep their equipment in first class condition and thoroughly instruct their truck salesmen in courtesies and the most desirable way of driving have very few traffic accidents.

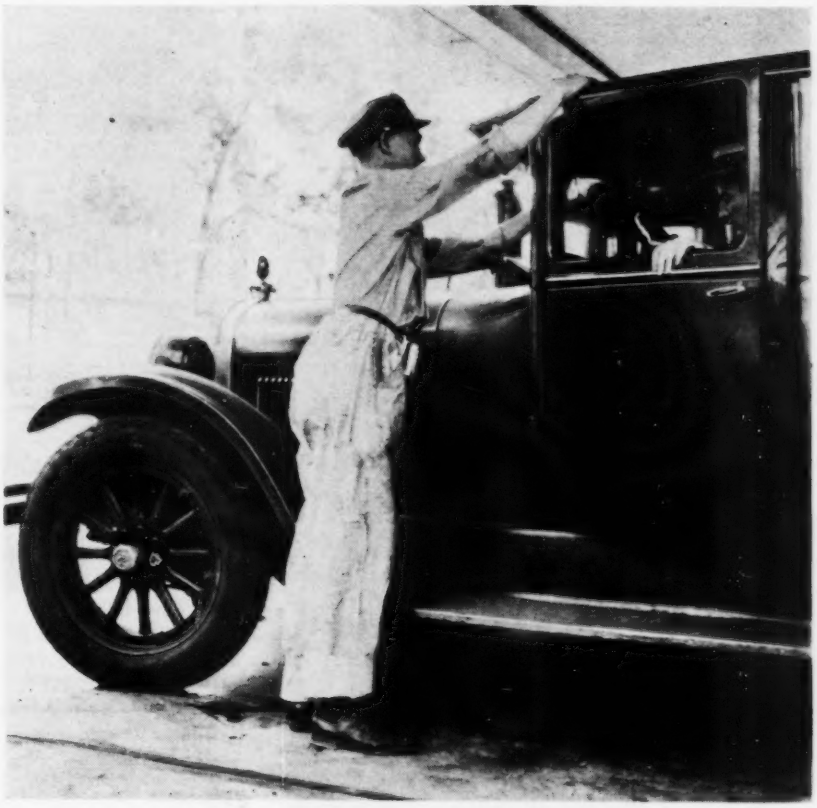
One large company will not accept an excuse from the truck salesman that the accident was caused because the other fellow tried to take the right of way away from him. The rules of the road may give the truck salesman the right of way, but regulations of the company will not permit him to use this as

an excuse for having an accident.

One of the largest marketing companies of the United States has not had a grade crossing accident with one of its trucks in several years. This is accounted for by the requirement that every truck salesman stop at railroad crossings and observe that no train or trolley is approaching from either direction, before proceeding to cross. These truck salesmen do stop, look and listen for they know that failure to do so means disciplinary action if they are caught. This record of no crossing accidents has also become a source of pride with the truck salesmen.

The opinion has been expressed that if every industry were to fully instruct its drivers in driving courtesy and rules of the road and keep its equipment in A-1 condition, as many oil companies do, a great step would have been made in solving the traffic accident problem.

Marketers are always confronted with the problem of mistakes in making deliveries of products. For example, after a truck had returned from making deliveries, a check-up on the tank compartments revealed 80 gallons more in a kerosine compartment than should have been and the gasoline compartment showed 80 gallons short.



Keep the fingers out of the door jamb

This meant to the bulk plant operator that the truck salesman had delivered 80 gallons of gasoline into customers' kerosine tanks. The fact was immediately reported to the headquarters office of the oil company and scouts hurried out over the route of the tank truck to purchase all the product sold as kerosine in the neighborhood where the truck had made deliveries.

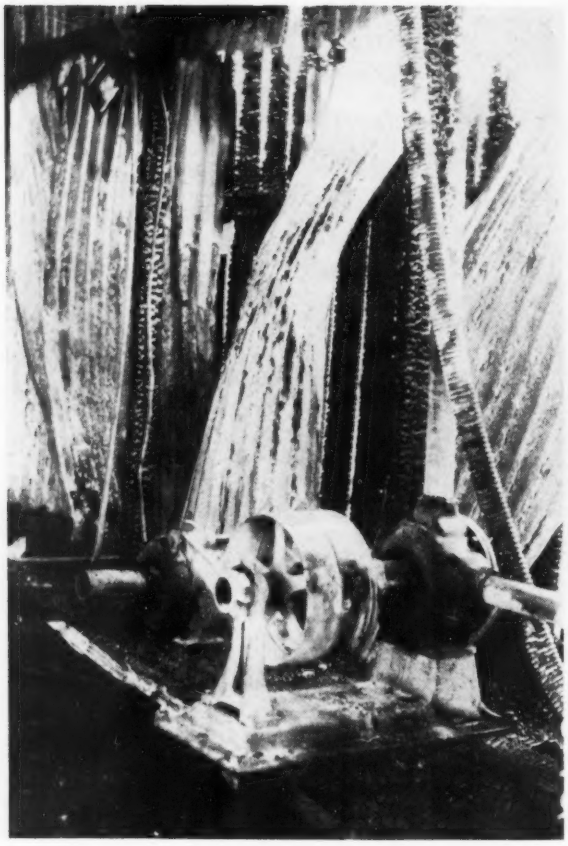
In spite of these efforts, three fires occurred when customers undertook to use this product as if it were kerosine. However, no serious damage was done.

When filling compartments in tank trucks, the bulk plant operator or the truck salesman filling the compartments should mark each discharge line on the tank truck according to the product loaded into the compartment and in making the delivery he should pay strict attention to the delivery of the correct product. A check of the contents of each compartment when a truck has returned to the bulk plant also aids in disclosing mistakes in deliveries.

Static has been blamed for many fires which were started by some thoughtless smoker. Where precaution to bond the filling lines to the truck tank is taken before loading operations are started the probability of a fire from static ignition is very remote.

An ambitious truck salesman decided that the filling line did not extend far enough into the tank compartment and thought

The fender is protection to the face, eyes and ears should the tire blow out



This truck was filled inside of a building near the motor

to reduce loss of products by putting a piece of old inner tube on the loading line as an extension to fill the compartment. His idea was right in that this extension would reduce the churning of the gasoline in the tank truck and reduce evaporation loss, but he did not realize that the piece of rubber tubing created a machine for the generation of static. The result was a serious tank truck fire.

Every truck driver should know that gasoline is a nonconductor of electricity and that gasoline flowing through a line has a tendency to build up a static charge. In order to be absolutely sure that a static spark will not jump from the loading line to the truck tank the loading line should be connected to the truck tank with a bonding chain or wire.

Formerly some bulk plants were constructed so that trucks were loaded inside of a building. Electric motors and gasoline engines were thoughtlessly placed in the same truck filling room. The sad experience of igniting vapors which had been driven out of the truck compartments as the gasoline was filling into them causing several fatalities made such installations distinctly undesirable and obsolete.

Open electric switches at bulk plants are installed only outside of buildings where there is no probability of the presence of gasoline vapor and trucks are filled outside of buildings so the gasoline vapor can be readily dissipated in the air. Motors and gasoline engines are installed separate from the pump room so that they cannot ignite vapors. Where electrical installations are made in pump rooms or close to filling operations vapor-proof equipment is used.

The Bureau of Explosives has provided regulations which must be complied with in the unloading of tank cars and any man delegated to the work of unloading a tank car should be familiar with these regulations for his own protection and the protection of the tank car and other property. Tank car unloaders must realize that the tank cars contain gasoline vapors which will burn or which may asphyxiate.

Recently an uninformed man was unloading a tank car; he had not been seen for some time and upon investigation he was found immersed in the gasoline in the tank car. For some unknown reason he had taken a five gallon bucket, climbed through the dome manhole into the tank car and had been overcome by the vapor.

After a tank car is unloaded the manhole cover should be very firmly bolted or screwed into place. Tank cars have contained bodies of dead men when opened at the loading racks at refineries. Hobos have opened loose dome covers and crawled into the tank car for protection from the weather and have lost their lives by the breathing of gasoline vapor. Just recently two children lost their lives by climbing into a tank car which had not been securely closed.

A traveling mechanic undertook to change a valve on a vertical storage tank containing gasoline. His calculations went wrong and the contents of the tank flowed down the ditch alongside of the loading rack track. Nothing happened until it reached the track switch some three hundred yards from the storage tank.

A lighted switch lantern ignited the vapor at this point and it flashed back to the storage tank setting fire to the drenched clothing of three men who were trying to stop the flow of gasoline from the tank. Three fatalities resulted. The mechanic had been overly ambitious in trying to change the leaky valve rather than wait for empty tank cars to be spotted on the spur track so the gasoline could be removed from

the storage tank to the tank cars before changing the valve.

Every service station salesman, truck salesman, or bulk plant employee should be instructed in the correct way to use the fire extinguishing equipment before a fire occurs. Too much is at stake in valuable property and lives of men to undertake to instruct the workers after a fire has started. When employes are trained in fire fighting before a fire occurs they more definitely understand fire causes and fires are more rare around these plants.

A large marketing company which has gone in strongly for instruction of marketing employes in accident prevention or in doing the job just as it should be done reports a 75 per cent reduction in fire losses in the last three years.

An example of the possibility of benefit from such instruction is found in the experience of the Kansas City Sales Division, Standard Oil Company (Indiana). This sales district with close to one thousand employes went an entire year without an injury causing the loss of time from duty to any member of its personnel. There was not a single fire loss and only one small property damage case. This is an outstanding accomplishment, but many other sales organizations are doing almost as well.

Fires and accidents which have been described in the foregoing cannot be prevented by mechanical means. Rules and regulations will not prevent these accidents. *Only complete instruction and thorough understanding of these situations by the individuals handling the work will obviate such occurrences.*

The American Petroleum Institute has a department of Accident Prevention with headquarters at Dallas, Texas. The function of this department is to aid the industry in the development of information which will help the petroleum companies to provide their employes with accident prevention information. As time goes on it is hoped that all oil company employes will be so well informed concerning their work that fires and accidents will cease to occur.

New Equipment

The United States Air Compressor Co., 5300 Harvard Ave., Cleveland, O., has added to its grease dispensing equipment a gear lubricant pump and an all pneumatic multiple greasing system which automatically supplies a steady flow of grease under 300 pounds working pressure.

With this system is furnished a rectangular grease container in two sizes. A full-sized opening for loading grease makes the container easy to fill.

A pumping mechanism in the system using air for motive power is different, the company claims, from other systems heretofore offered. A constant pressure of 300 pounds in the grease line is produced by means of heavy compression spring. A booster gun delivers a measured shot of grease at each fitting.

The gear lubricant pump is designed for mounting on any standard grease drum to provide a centralized system for feeding gear lubricants through conduit to pits or lifts. A meter records the total grease sales and the amount dispensed into each car.

* * *

Geo. D. Roper Corp., Rockford, Ill., has placed on the market a large transfer pump of 300 gallons per minute capacity, enabling bulk stations to reduce transferring time.

This pump will unload tank cars and transfer liquids from storage to truck tanks in less time, the company says. Where it takes an hour and 20 minutes, for instance, to unload an 8000 gallon tank car, using an ordinary 100 gallon per minute pump, the new Roper 300 gallon per minute pump will transfer this same amount of liquid in 27 minutes, the company says, saving 67 per cent in transferring costs.

The new pump is adapted to gasoline, oil, kerosine, and other oils and liquids. It is furnished in large, hardened and ground journals running in metal bearing bushings for pumping non-lubricating liquids, or with a double row of ball bearings on ends of both shafts, for pumping lubricating liquids.

* * *

The Universal Pump & Track Corp., Cleveland, O., manufacturer of oil marketing equipment, has appointed L. W. Nickel general sales manager. Mr. Nickel has had wide experience as a commercial engineer and as consultant with executives on marketing and advertising problems.

Fred Charlton, president, henceforth will devote all his time to general administrative work.

* * *

Aro Equipment Corp., Bryan, O., manufacturer of lubrication equipment, held a conference in February upon the completion of its first year in business.

New methods of lubrication equipment were presented and demonstrated, including stationary, portable, pneumatic and electric units and complete systems. A feature was the Aro pneumatic hammer grease gun, including the pneumatic riveting hammer principle for high pressure lubrication.

Among the improvements made in this gun during 1930 were those which would increase speed, efficiency and convenience in handling, the company says.

Pressures over 10,000 pounds were developed during the demonstrations. A new electric high-pressure lubricator was also demonstrated to develop 12,000 pounds of grease pressure, handling heavier greases efficiently.

* * *

A. Y. McDonald Mfg. Co., Dubuque, Ia., has developed as one of the newer additions to its line of truck tank equipment, a faucet which, it says, will not leak and which has been cut down so it can be used on any truck tank. It is made of red brass, has a disc which will not swell in gasoline, can be held one-third, two-thirds or fully

open and has a removable hose end should threads become damaged or worn.

It has also developed a new aluminum truck tank cap and vent designed to decrease weight of tank, and foot valves guaranteed to hold gasoline, the company says. Four different types of foot valves are described, among them being a composition disc valve for users who prefer them.

* * *

The Davis Welding & Mfg. Co., 1110 Richmond St., Cincinnati, O., has published a 63-page catalog telling how to reduce costs in motor transportation of gasoline and oils and pointing out how transporting and handling of oils with its lube oil cans, buckets and funnels results in economies.

Major factors in the construction of its truck tanks, the company says, are safety, appearance, engineering and reduction in weight without lowering the safety factor.

It describes truck and trailer tanks of steel, aluminum and other metal alloys in many sizes and includes illustrations of them in use by a few of the 50 oil companies which have purchased five or more since 1928. It points out six reasons why Davisbilt pressed steel truck tanks cut the cost per gallon mile, including the fact that this type of tank reduces weight, adds strength, improves finish and appearance, cuts costs, speeds up deliveries and that repairs and replacements are simplified by standardizing all steel parts and making them interchangeable.

There are descriptions of fuel oil vehicle tanks, clipper tanks up to and in excess of 1000 gallons, special specification tanks, all sorts of equipment for trucks and tanks, airport tenders, tests of aluminum tanks, and other information of value and interest to truck tank users.

* * *

Ingersoll-Rand Co., 11 Broadway, New York City, has received an order for seven 55-ton oil-electric locomotives from the Bush Terminal Co., to be used in switching service at the company's terminal at the foot of 43rd street, Brooklyn.

ON THE LAZY BENCH

Oil-Treater's Lament

How doth the busy olefin
  Delight to saturate,
He takes up all the halogens
  At an alarming rate.

He joins with different acids
  With small discrimination,
And shows inherent tendencies
  Toward polymerization.

His oxidation products,
  Are gummy, tough and resinous
And use of oils containing them
  Is nearly always hazardous.

Would that the olefin preferred
  To add molecular hydrogen,
Instead of showing choice absurd
  For oxygen or halogen.

We'd then perhaps get treated oils
  Without such awful losses
That lowered yield of product spoils
  Our status with the bosses.

R. F. Davis,
Universal Oil Products Co.

* * *

On the eve of their execution, an Irishman, a Scotchman and a Jew were asked if they would like any special delicacy. The Irishman voted for Irish stew, the Scotchman for a bottle of whiskey, and the Jew fancied strawberries and cream.

"But," protested the warden, "strawberries are not in season."

"That's all right," replied the Jew, "I can vait."

—The Oil Can
Illinois Petroleum Marketers Association

* * *

"I was out with a new girl last night."

"What's she like?"

"Everything. Beefsteak, potatoes, lobster salad, pie, ice cream—everything."

—Our Sun
Sun Oil Co.

* * *

Dear Doctor: What should I take when I am run down?

Reply: The license number.

—The Diamond
Mid-Continent Petroleum Corp.

Service

A father, nervously waiting for a telegram, received the following message: MARY GAVE BIRTH TO BABY GIRL THIS MORNING STOP BABY AND MOTHER BOTH WELL AND HAPPY.

On the corner of the envelope containing the message was this label: "When you want a boy, ring Western Union."

—The Unloading Rack
A. Y. McDonald Mfg. Co.

* * *

Van Jay: "I wish I could find out just how many relatives I have here on this earth."

Van Puf: "Why, that's the easiest thing in the world—just buy a summer cottage."

—Our Sun
Sun Oil Co.

* * *

I do not ask for my modest abode
  A glen or a sylvan scene.
I would live in a house by the side of the road
  And peddle gasoline.

—The Oil Can
Illinois Petroleum Marketers Association

* * *

Author: This is the plot of my story. A midnight scene. Two burglars creep stealthily toward the house. They climb a wall, force open a window and enter the room. The clock strikes one.

Sweet Thing (breathlessly): Which one?

—The Diamond
Mid-Continent Petroleum Corp.

* * *

Snappy Title

"I don't know whether this is a good story or not," said the new reporter, "but the Methodists, Baptists, Presbyterians, Episcopalians and Universalists are asking funds for new church buildings."

"Fine!" exclaimed the city editor. "Write a column on it and we'll head it 'Sects Appeal.'"

—The Gas Line
West Penn Oil Co.

Positive Actions, Sales Talk Mark Good Station Man

By E. L. Barringer

N. P. N. STAFF WRITER

JACKSONVILLE, Fla. A MOTOR car swerves off the highway into a service station. As it pulls up beside the gasoline pump island a salesman comes on the run from the station building. If there are ladies in the party he tips his hat as he nods in recognition of the customer.

The salesman approaches the pump serving anti-knock gasoline. With the nozzle in hand he inquires, "May I fill it up, sir?" From filling the gasoline tank he moves quickly to the other duties of selling and servicing. Every movement, every sales talk is positive.

Such is a picture of the ideal sales presentation for gasoline and lubrication service. The materials were supplied by F. H. Hume, superintendent of stations for the Shell Petroleum Corp. in the Florida division.

Now this is the ideal picture, and Mr. Hume has not overlooked the obvious trials and troubles to be met in achieving such a merchandising program.

His analysis of the station employe shows him to be a triple threat man. The employe is part mechanic to perform maintenance tasks; he is part accountant to compile accurately sales and inventory data for the office; and he is part salesman to merchandise his goods.

The problem of shaping the employe into a first class workman for the first two classifications, mechanic and accountant, is geared to the individual company. The problem of shaping the employe into a salesman finds a common ground with each company.

To return to the picture of ideal merchandising we find that the first sales point is that the attendant comes on the run. The customer is given the impression of speed. This is in recognition that the customer is the driver, not the motor car.

In turning off the highway into the station the speedometer drops rapidly from road speed to zero. The machine is changed quickly from speed to rest. But the driver is not as flexible. His mind is geared to high speed thinking when driving an auto at 50 to 60 miles an hour. When the auto stops at the gasoline pump island his mind may still be racing at high speed.

The salesman approaching a customer in this frame of mind may irritate if he is sluggish. The slow approach has the speed of a turtle. The salesman should run, move fast, to keep his movements in line with the customer's frame of mind.

By going to the anti-knock gasoline pump the salesman is inferring that the customer wants the best gasoline. The question, "May I fill it up?" is to sell the maximum bill of goods.

THE difficult part of salesmanship comes in when the customer limits the size of his purchase to less than the maximum. It is a ticklish proposition to reopen the subject when the order has been filled.

Diplomacy is Mr. Hume's prescription. If the tank will take more gasoline the salesman can tell the customer that it will hold four more gallons, or whatever amount required.

In case the salesman sees that the remark has not set well with the customer he can turn it off by adding that the information was offered to help in checking the gasoline gauge. "You know sometimes gauges get off and I don't want you stranded on the road if you think the tank is full now," and diplomacy will get the salesman out of a tight place.

In checking crankcase oil diplomacy also can be used. Most stations in the South have porters. Negroes are employed for this work. They do the servicing work around the auto. The porter co-operates in getting under the hood by watching the salesman.

WHILE the salesman is checking the radiator, for instance, the porter can be working at the back of the car, wiping off the rear window. As the salesman nears the end of his task the porter comes around to the oil side of the engine and lifts the hood. The customer is watching the salesman, paying no attention to the porter.

After the radiator check is completed the salesman jumps to the engine checking the oil without having to open the hood. The quickness of the movement has taken the customer off his guard, and unless the salesman checks the oil he has no opportunity to sell any.

The attitude of being positive is important in Mr. Hume's merchandising ideal. The attendant is being positive by moving quickly, in keeping with the customer's mental attitude. The attendant is positive when he asks, "May I fill it up?" The "how many" question is negative.

Mr. Hume illustrates the point of being positive, and also of being alert, by an in-

cident he observed while in a service station.

An auto with a license from a northern state drove into this Florida station. A grey haired man was driving, accompanied by his wife. Mr. Hume sized up the couple as the typical "ma and pa" type. This was their vacation, a winter in Florida, and they were enjoying it.

The station salesman blundered in his approach by asking, "How many do you want, five gallons?"

In spite of the rebuff the customer came back smiling.

"No," he said, "we're taking a long drive tomorrow and I guess you'd better fill it up." There was the cue to what the man really wanted.

After five gallons of gasoline had been put in the tank the salesman announced that was all it would hold. Mr. Hume then entered the scene, suggesting that possibly the tank would hold more. And the tank did, just four more gallons, but only after considerable protesting from the salesman after each gallon was put in.

The salesman then checked the oil, and sold a quart. By that time the old gentleman was getting nervous. There was nothing to do but put in the quart, get the money, and consider the sale closed.

In a recapitulation of that piece of salesmanship Mr. Hume points out that the salesman made a fatal error in his first question. The salesman was negative by asking "how many," and he invited the customer to limit his purchase.

Fortunately the customer hurdled the question, and made known his wants. In fact, the remark about the trip the next day was an open invitation for the salesman to give the car "the works."

If the salesman had been positive he would have filled the tank quickly to leave time for selling other services. If the salesman had been alert a sale of nine gallons of gasoline and a quart of oil would have been turned into a sale of nine gallons of gasoline, an oil change, and a lubrication job.

Serves You Best Helps You Serve Best

In these words CHAMPION'S unmatched Efficiency, Dependability, Economy and Long Life are summed up.

You want, and CHAMPION produces for you, Service Equipment that *helps* you win and hold patronage — Service Equipment that does its work so well that it actually *improves* your service and helps you maintain a higher standard of efficiency, speed and quality in every service you perform.

Find out for yourself about this *service-improving* line. The coupon below will bring you full information on prices and specifications.

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CHAMPION
Pneumatic Machinery Co.
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CHICAGO, ILLINOIS

CHAMPION

CHAMPION PNEUMATIC MACHINERY CO.
8168 South Chicago Ave., Chicago, Illinois.

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☐ Air Compressors ☐ Service Towers ☐ Ceiling Reels ☐ Car Washers ☐ Paint Spraying Equipment ☐ Air Scales.

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ADVERTISING PAGES REMOVED

Merchandising and Jobbing Ideas Marketers Are Practising

By E. L. Barringer

N. P. N. STAFF WRITER

A MODERN lubrication department in an automobile dealer's garage at Detroit has enabled it to cushion the business losses of last year. While other dealers reported losses up to 50 per cent this agency experienced only a 20 per cent decline through maintaining a steady flow of lubrication customers through the shop.

Results obtained by this dealer through modernizing his department are indicative of the competition our service stations can expect from the auto sales agencies. Loss of business through the decline in sales of new and used cars, and in repairing, has awakened the dealer to the possibilities of lubrication that he has passed over in flush years.

This dealer, the Hall-Dodds Co., a Ford agency, retained its lubrication customers through making the department as modern as possible. As the garage could not be rebuilt the departments were moved to make them more accessible.

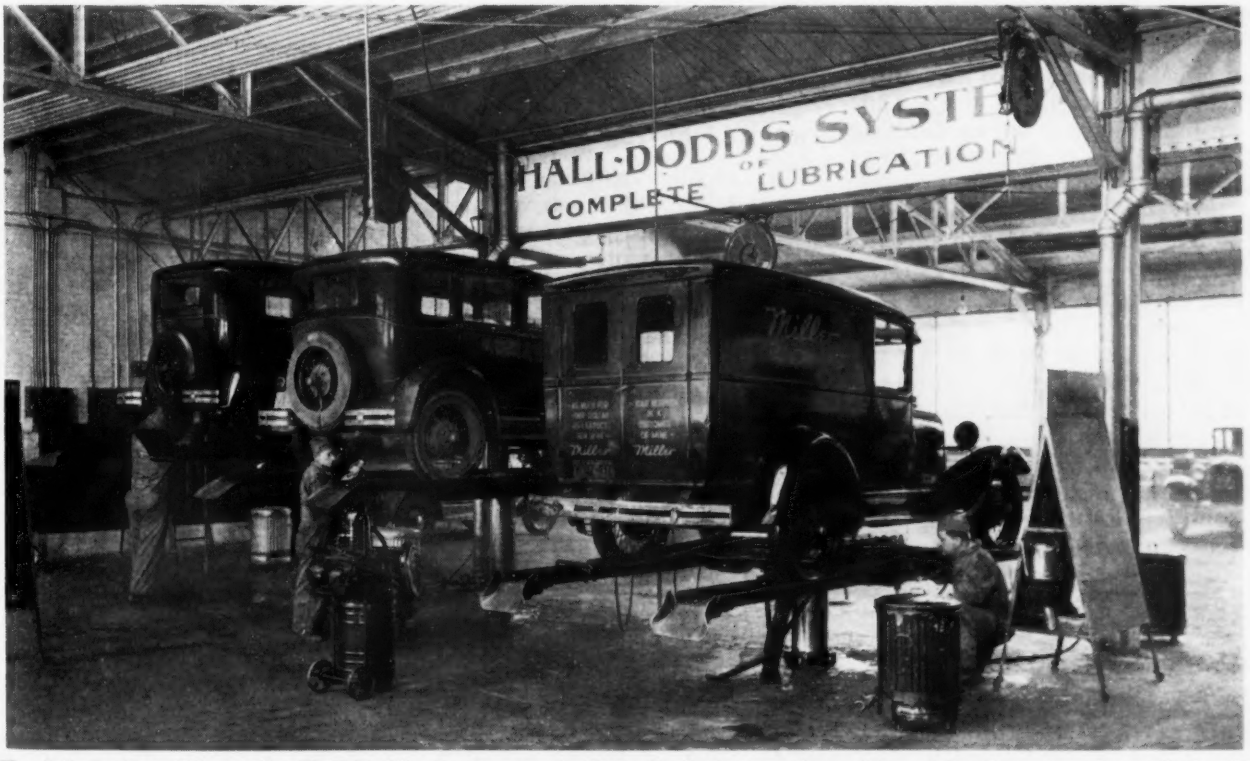
The old policy had been to line up the departments along the wall. Each had its own space. This was satisfactory, as far as working conditions were concerned, but the customer had to back up to get his car out of the shop.

The first change was in the entrance. With only one door this space was crowded, especially during rush hours, and the congestion was relieved by adding two more entrance doors.

As the customer drove in he was greeted by a service man, in uniform, in a short passageway leading to the garage proper. On one side the brake and wheel testing machines were placed; on the other the car washing department.

It was planned to have the customer drive right in from the street into the car washing department. This arrangement had to be reversed, with the entrance to the line from the inside of the garage, as customers would drive in the middle entrance.

Directly ahead of the passage entrance is the lubrication and oil changing lifts. The customer can drive through the passage, have his work ticket made out, and the car moved ahead to the lifts. After the job is completed the car continues its forward movement off the lifts and out to a side street on the other side of the garage.



The lubrication lifts at the Hall-Dodds Co. garage in Detroit that were brought out in the open from their old place in the corner to help cut down losses

In spite of the narrow corner lot, this one-stop station of the Consumers Oil Co. of Augusta, Ga., has ample working space. A curb on the side street was cut away for drives. The car washing department in the rear is open on three sides, and beyond are the lifts for lubrication. Weather is no consideration here. Besides petroleum products the company sells a nationally advertised line of tires and batteries, and such accessories as light bulbs, breather caps, gas tank caps, spark plugs, hose connections, and polishes. A service station operated by the company carries a small stock of this line of merchandise. The Consumers Oil Co. was founded in 1904 by H. C. Boardman, after being employed for 22 years by the Standard Oil Co. His battles to remain in business are part of the oil history of this section. About a year ago most of the properties, 22 stations, were sold to a major oil company. Four sons continued in the oil business with these two stations and a bulk plant

The garage has three lifts; one is for trucks, and the others for passenger cars. As an additional merchandising feature the guns for special greases are arranged on portable boards, and are kept near the lifts.

At the head end of the lifts the lubricating oil storage tanks have been placed.

A special feature of the lubrication department is the home-made spring spray device. Suspended from the roof are a number of air lines on reels for inflating tires. Several of these were converted into spring spray lines.

Workmen erected a tank for the spraying oil, of eight gallons capacity, on a shelf along the wall. This tank is connected to an air line. The air chuck on the reel was replaced with a spray nozzle. When the workmen come to the spring spray job they grab the hose out of the air, go over the car, and let the line go back in place, out of the way.

* * *

Large Domestic Oil Tanks Save for Everyone

The savings in the use of large storage tanks with domestic oil burners, to the customer and the jobber, are illustrated by installation in Selma, Ala.

Several years ago some of the better homes in Selma were equipped with oil burners, and fortunately 3000-gallon storage tanks were installed. These home owners had been in the habit of buying coal in the summer, obtaining the full winter's requirements at the off season price, and having it delivered.

The Hollis-Vaughan Oil Co. supplied oil to these burners, and obliged the owners by letting them buy oil on the same basis as they had purchased coal. Orders were taken in the summer at the low retail price. The oil jobber in turn covered by purchasing on the low spot market.

When the oil arrived on the siding it was taken directly from the tank car to the customer's storage tank. A truck with a 400 gallon tank has hauled as much as 6000 gallons of burner oil in a day.

The jobber saved through the large storage tanks by elimination of storage at the bulk plant. The customer saved by buying his full winter's supply at summer prices. Many of these burner oil sales were for cash, and the rest on open account.

Now there are about 15 domestic burners in Selma. The business is still handled in the same manner. Orders are grouped, and the quantities of the various grades are ordered and delivered. An office building, and hospital, are heated with oil now, and as these installations cannot carry the full winter's requirements an oil storage tank has been erected at the bulk plant to handle these two accounts.

The Millionth Badger Meter

Upon company's completion of 25 years in business, employes of the Badger Meter Mfg. Co., Milwaukee, presented C. W. Wright, president, with the one millionth meter turned out by the company. The meter was gold plated and placed in a glass cover and pedestal to help preserve it.

The company began by making cold water meters and later added meters for gasoline, oil and hot water, as well as for other industrial uses.

ADVERTISING PAGES REMOVED

Crude Production by Fields

By Telegraph—Daily average gross output, by fields in U. S., for week ending with dates below as compiled by A. P. I.

PRODUCTION SUMMARY

	April 18	April 11
Production east of Rockies	1,795,100	1,779,350
Increase		15,750
Total production in U. S.	2,422,000	2,308,250
Increase		113,750
Crude oil imports	139,145	101,715
Increase		37,430
Total new crude supply	2,561,145	2,409,965
Increase		151,180

OKLAHOMA

	Apr. 18	Apr. 11
Allen Dome	12,750	9,250
Asher	700	700
Asher, West	6,950	6,850
Blackwell	2,850	2,850
Bowlegs	14,050	7,950
Braman	1,850	1,900
Bristow-Slick	12,000	12,000
Burbank	12,800	12,700
Carr City	13,100	9,800
Cromwell	4,800	4,800
Cushing	12,700	12,700
Davenport	950	950
Duncan Dist.	6,550	6,700
Earlsboro	18,850	13,100
Earlsboro, East	19,800	14,000
Earlsboro, So.	6,950	8,400
Fox-Graham	4,100	4,050
Garber	4,000	4,000
Healdton	10,550	10,600
Hewitt	6,100	6,100
Hubbard	950	950
Konawa	8,400	12,400
Little River	23,500	15,100
Little River, E.	6,400	7,900
Logan Co.	3,850	3,900
Maud	2,450	1,850
Mission	8,750	3,900
Oklahoma City	192,750	163,700
Okmulgee, No.	9,200	9,200
Okmulgee, So.	5,000	5,000
Osage (Outside Burbank)	21,700	22,300
Papoose	2,050	2,000
Pearson	550	550
Sasakwa	2,800	2,400
St. Louis	21,350	17,450
Scholem-Alechem	12,900	12,850
Searight	4,500	2,750
Seminole	13,500	9,000
Seminole, East	1,900	1,750
Thomas	600	600
Tonkawa	6,200	6,150
Wewoka	8,550	8,500
Yale-Jennings	6,100	5,800
Others	48,750	48,300
Total, Okla.	585,100	513,700
Increase		71,400

KANSAS

Augusta-Fox Bush	2,900	2,850
Churchill	3,100	3,150
El Dorado-Towanda	12,200	12,150
Florence-Covert	700	700
Greenwood Co.	16,300	16,250
Oxford	2,200	2,200
Peabody-Elbing	1,500	1,500
Rainbow Bend	1,400	1,400
Russell	3,000	3,000
Sedgwick Co.	17,750	17,450
Voshell	17,300	17,850
Others	31,700	31,000
Total, Kans.	110,050	109,500
Increase		550

NORTH LOUISIANA

Caddo, light	7,450	7,550
Caddo, heavy	2,800	2,700
Cotton Valley	1,750	1,750
De Soto and Red River	2,650	2,650
Haynesville	5,950	5,850
Holly	550	550
Homer	3,300	3,300
Sarepta Carterville	1,250	1,250
Urania	4,500	4,550
Zwolle	7,300	7,050
Others	1,550	1,550
Total, N. La.	39,050	38,750
Increase		300

ARKANSAS

Champagnolle	3,000	3,000
El Dorado	3,700	3,600
Lisbon	750	750
Nevada	1,000	1,000
Smackover, light	4,150	4,200
Smackover, heavy	32,100	32,200
Stephens	850	850
Others	1,400	1,550
Total, Ark.	46,950	47,150
Decrease		200

ROCKY MOUNTAIN

Wyoming

Big Muddy	2,300	2,200
Elk Basin	750	650
Grass Creek	2,150	2,050
Labarge	1,000	1,400
Lance Creek	200	200
Lost Soldier	3,850	2,750
Oregon Basin	1,300	1,300
Rock River	2,000	2,000
Salt Creek	26,200	26,050
Others	3,900	3,700
Total, Wyo.	43,650	42,300
Increase		1,350

Montana

Cat Creek	1,100	1,050
Pondera	1,600	1,700
Sunburst	4,450	4,450
Others	1,500	1,600
Total, Mont.	8,650	8,800
Decrease		150

Colorado

Florence	450	500
Fort Collins	1,000	1,000
Moffat (Craig)	950	900
Others	1,800	1,850
Total, Colo.	4,200	4,250
Decrease		50

New Mexico

Artesia	550	550
Bal. Eddy Co.	150	150
Hobbs High	32,300	31,550
Bal. Lea Co.	4,400	4,800
Hogback	450	450
Rattlesnake	1,100	800
Table Mesa	50	50
Total, N. M.	39,000	38,350
Increase		650
Total, Rocky Mountain	95,500	93,700
Increase		1,800

TEXAS (OUTSIDE GULF COAST)

Panhandle District

Carson Co.	3,600	3,700
Gray Co.	42,650	38,700
Hutchinson Co.	8,600	7,700
Wheeler Co.	250	300
Others	200	250
Total, Panhandle Tex.	55,300	50,650
Increase		4,650

North Texas

Archer Co.	11,650	11,550
Burkburnett	6,550	7,000
Electra	8,950	8,500
Iowa Park and K. M. A.	3,750	3,600
Montague-Cooke	5,400	5,400
Wilbarger	9,950	10,000
Young Co., No.	9,900	9,900
Others	1,200	1,200
Total, N. Tex.	57,350	57,150
Increase		200

West Central Texas

Brown Co.	3,700	3,700
Callahan Co.	1,500	1,500
Coleman Co.	1,700	1,700
Eastland-Desdemona	3,800	3,800
Jack Co.	1,100	1,100
Palo Pinto Co.	300	300
Shackleford Co.	3,600	3,600
Stephens Co.	4,600	4,600
Throckmorton Co.	400	400
Young Co., So.	3,300	3,300
Others	1,050	1,050
Total, W. Cen. Texas	25,050	25,050

West Texas

Crane and Upton Cos.	23,750	24,000
Crockett Co.	1,750	1,800
Ector Co.	6,850	6,450
Howard Co.	29,000	29,400
Jones Co.	1,200	1,200
Mitchell and Scurry Cos.	2,000	2,050
Reagan Co.	28,450	35,000
Winkler Co.	45,700	45,900
Yates	68,600	83,200
Bal. Pecos Co.	4,000	6,000
Others	6,900	6,950
Total, West Texas	218,200	241,950
Decrease		23,750

East Central Texas

Boggy Creek	2,200	2,150
Corsicana-Powell	4,850	4,800
Currie	300	250
Mexia	3,600	3,600
Nigger Creek	150	150
Richland	100	100
Rusk County: Joiner Field	62,100	59,700
Kilgore	148,100	104,550
Gregg Co.: Longview	38,200	30,750
Van Zandt	39,900	40,100
Wortham	500	500
Others	50	50
Total, East Cen. Tex.	300,050	246,700
Increase		53,350

Southwest Texas

Chapmann Abbot	4,200	4,200
Dale	300	300
Darst Creek	20,450	20,050
Laredo Dist.	13,850	13,850
Luling	9,200	9,050
Lytton Spgs.	700	700
Salt Flat	12,700	12,300
Somerset	1,300	1,300
Others	500	500
Total, S. W. Texas	63,250	62,250
Increase		1,000
Total, Texas, (Outside Gulf Coast)	719,200	683,750
Increase		35,450

GULF COAST

Coastal Texas

Barbers Hill	25,700	23,000
Batson	1,000	1,000
Big Creek	3,300	3,250
Blue Ridge	1,100	1,100
Boling	750	700
Damon Mound	400	550
Esperson	2,250	2,300
Fannett	500	400
Goose Creek	4,200	4,460
Hankamar	2,650	2,900
Hull	6,300	6,300
Humble	10,500	10,500
Moss Bluff	600	600
No. Dayton	550	700
Orange Co.	1,950	1,950
Orchard	1,900	1,900
Pettus	7,400	7,300
Pierce Junct.	9,100	8,050
Port Neches	1,450	1,450
Raccoon Bend	9,200	8,900
Refugio Co.	32,400	31,350
Saratoga	1,050	1,050
Somerville	2,050	2,300
Sour Lake	2,000	2,000
So. Liberty	2,100	2,300
Spindletop	9,800	10,000
Sugarland	11,750	11,750
W. Columbia	4,200	4,200
Others	2,050	2,100
Total, Coastal Texas	158,200	154,300
Increase		3,900

Coastal Louisiana

Edgerly	450	400
Evangeline	800	800
Hackberry, E.	1,900	1,800
Hackberry, Old	800	800
Lake Barre	2,250	2,400
Lockport	6,150	6,150
Port Barre	1,750	1,700
Sulphur Dome	1,750	1,800
Vinton	6,400	6,500
White Castle	1,000	1,000
Others	4,200	3,650
Total, Coastal Louisiana	27,450	27,000
Increase		450
Total, Gulf Coast	185,650	181,300
Increase		4,350

CALIFORNIA

Dominguez	11,800	12,000
Elwood-Goleta	34,000	34,800
Huntington Beach	22,000	22,000
Inglewood	15,000	15,000
Kettleman Hills	26,600	26,600
Long Beach	88,800	89,400
Midway-Sunset	52,600	54,900
Playa del Rey	29,000	28,500
Santa Fe Spgs.	71,700	70,800
Seal Beach	15,600	15,600
Ventura Ave.	44,800	43,200
Others	115,000	116,100
Total	526,900	528,900
Decrease		2,000

EASTERN

(Not including Michigan)	105,300	103,100
Increase		2,200

MICHIGAN

Mt. Pleasant	6,400	6,500
Muskegon	1,750	1,750
Saginaw	150	150
Total, Mich.	8,300	8,400
Decrease		100

Compilation Of Mid-Continent Refinery Operations

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Mid-Continent Refinery Operations, Week Ended April 17 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	West Texas	North La.-Ark.	Total Week Ended April 17
Plants Reporting	10	23	23	10	10	76
Da. Av. Cap. (Bbls.)	94,000	162,500	107,400	71,500	60,700	496,100
Da. Cracking Capacity	53,200	64,600	23,100	26,250	31,700	198,850
Da. Av. Crude Runs	62,325 — 0.6	105,987 + 9.5	60,305 + 61	38,769 + 7.9	44,386 — 6.7	311,772 + 4.0
Da. Av. Other Oil	4,260 — 37.5	2,033 — 28.2	2,406 — 39.3	....	21,078 + 21.1	29,777 — 4.0
GASOLINE—Gallons						
Stocks, April 10	30,830,000	44,635,000	36,045,000	11,555,000	4,664,000	127,729,000
Prod. 4-10 to 4-17	11,273,000 — 0.7	17,981,000 + 30.1	8,842,000 — 6.1	3,561,000 — 2.0	7,410,000 + 5.3	49,067,000 + 8.4
Ship. 4-10 to 4-17	12,780,000 + 17.9	16,252,000 + 1.4	10,786,000 + 20.8	3,218,000 + 12.9	6,576,000 — 10.4	49,612,000 + 7.9
Stocks, April 17	29,323,000 — 4.9	46,364,000 + 3.9	34,101,000 — 5.4	11,898,000 + 3.0	5,498,000 + 17.9	127,184,000 — 0.4
Ratio Sales to Prod.	113.4%	90.4%	122.0%	90.4%	88.7%	101.1%
KEROSINE—Gallons						
Stocks, April 10	8,028,000	15,037,000	2,067,000	7,000	158,000	25,297,000
Prod. 4-10 to 4-17	1,961,000 — 11.3	2,390,000 + 20.4	1,073,000 — 0.6	....	349,000 + 22.9	5,773,000 + 3.8
Ship. 4-10 to 4-17	2,468,000 + 11.0	2,898,000 + 24.3	1,127,000 — 4.5	3,000 — 89.7	168,000 — 60.2	6,664,000 + 7.7
Stocks, April 17	7,521,000 — 6.3	14,529,000 — 3.4	2,013,000 — 2.6	4,000 — 42.9	339,000 +114.6	24,406,000 — 3.5
Ratio Sales to Prod.	125.9%	121.3%	105.0%	....	48.1%	115.4%
STOVE DISTILLATE—Gallons						
Stocks, April 10	2,981,000	4,597,000	480,000	97,000	39,000	8,194,000
Prod. 4-10 to 4-17	368,000 — 18.8	623,000 — 17.6	397,000 + 36.4	32,000 — 3.0	75,000 + 66.7	1,495,000 — 5.3
Ship. 4-10 to 4-17	1,273,000 +122.9	493,000 — 50.4	363,000 + 2.0	21,000 + 75.0	64,000 +113.3	2,214,000 + 12.8
Stocks, April 17	2,076,000 — 30.4	4,727,000 + 2.8	514,000 + 7.1	108,000 + 11.3	50,000 + 28.2	7,475,000 — 8.8
Ratio Sales to Prod.	345.9%	79.1%	91.4%	65.6%	85.3%	148.1%
GAS OIL—Gallons						
Stocks, April 10	3,488,000	28,313,000	2,892,000	4,307,000	5,923,000	44,923,000
Prod. 4-10 to 4-17	633,000 — 21.6	1,428,000 + 5.5	555,000 — 41.0	632,000 — 51.0	2,377,000 — 6.9	5,625,000 — 19.0
Ship. 4-10 to 4-17	846,000 + 27.8	1,150,000 — 37.9	547,000 — 39.2	693,000 + 26.9	1,156,000 — 49.5	4,392,000 — 29.7
Stocks, April 17	3,275,000 — 6.1	28,591,000 + 1.0	2,900,000 + 0.3	4,246,000 — 1.4	7,144,000 + 20.6	46,156,000 + 2.7
Ratio Sales to Prod.	133.6%	80.5%	98.6%	109.7%	48.6%	78.1%
FUEL OIL—Gallons						
Stocks, April 10	11,082,000	49,474,000	60,283,000	14,183,000	21,911,000	156,933,000
Prod. 4-10 to 4-17	4,773,000 — 20.1	6,511,000 + 66.0	6,618,000 + 25.4	5,661,000 + 11.7	5,161,000 — 4.9	28,724,000 +11.9
Ship. 4-10 to 4-17	4,516,000 — 6.5	5,036,000 + 32.8	6,109,000 + 5.2	4,341,000 + 9.7	5,494,000 — 0.2	25,496,000 + 6.7
Stocks, April 17	11,339,000 + 2.3	50,949,000 + 3.0	60,792,000 + 0.8	15,503,000 + 9.3	21,578,000 — 1.5	160,161,000 + 2.1
Ratio Sales to Prod.	94.6%	77.3%	92.3%	76.7%	106.5%	88.8%

Gasoline Produced by Various Methods, Week Ended April 17

	Kansas	% of Total	Oklahoma	% of Total	North & Cent. Texas	% of Total	West Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	6,328,000	56.1	12,167,000	67.7	5,460,000	61.8	3,406,000	95.6	3,309,000	44.7	30,670,000	62.5
Cracked	3,950,000	35.0	4,773,000	26.5	2,270,000	25.7	.....	....	3,223,000	43.5	14,216,000	29.0
Natural	995,000	8.9	1,041,000	5.8	1,112,000	12.5	155,000	4.4	878,000	11.8	4,181,000	8.5
Total	11,273,000		17,981,000		8,842,000		3,561,000		7,410,000		49,067,000	

\+ or — columns are % change over previous week.

Gasoline Stocks Again Reduced in Mid-Continent

Staff Special—By Telegraph

TULSA, April 20

GASOLINE shipments from Mid-Continent refineries that report their operating statistics weekly to NATIONAL PETROLEUM NEWS, were the largest in the week ended April 17 than in any week since the one ended Sept. 26, 1930. The shipments were 3,800,000 gallons larger than those of the preceding week.

Part of the increase in shipments may be attributed to the rushing to distributing points by several large refiners, of gasoline to be used in competition with the Standard Oil Co. of Indiana's new low priced gasoline.

Crude oil runs were increased a daily average of 12,000 barrels in the whole area although runs were cut in the Kansas and Louisiana-Arkansas districts.

Gasoline output was increased 3,800,000 gallons. Output of gasoline at Oklahoma was increased 30 per cent over the preceding week's output. Gasoline stocks were lowered 540,000

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended April 17. Change in stocks figures from March 20.

GASOLINE

	Gallons
Production	181,074,000
Shipments	187,696,000
Net change in stocks	—6,622,000
Ratio sales to production	103.7%

KEROSINE

Production	22,215,000
Shipments	25,151,000
Net change in stocks	—2,936,000
Ratio sales to production	113.2%

STOVE DISTILLATE

Production	6,454,000
Shipments	7,778,000
Net change in stocks	—1,324,000
Ratio sales to production	120.5%

GAS OIL

Production	25,977,000
Shipments	21,679,000
Net change in stocks	+4,298,000
Ratio sales to production	83.5%

FUEL OIL

Production	102,961,000
Shipments	99,111,000
Net change in stocks	+3,850,000
Ratio sales to production	96.3%

gallons, drafts being made in the Kansas and North Texas districts.

Kerosine production was increased 3.8 per cent and shipments rose 7.7 per cent. Stocks were reduced 3.5 per cent.

Distillate stocks were reduced but gas oil and fuel oil stocks increased.

Canadian Oil Companies Report 1930 Income

TORONTO, April 18.—Home Oil Co., Ltd., of Canada has reported gross income of $969,466 for 1930 compared with $1,271,762 for 1929 and net income of $226,559 after depreciation and depletion. Intimation was made in the annual report that dividend payments may not be resumed for some time.

Foothills Oil & Gas Co. Ltd., which operates in Turner valley, Alberta, netted $35,087 last year. The company has negotiated an arrangement for Imperial Oil, Ltd., to do its drilling.

Net earnings of Petrol Oil & Gas Co. in 1930 amounted to $1686.

Canadian Western Natural Gas, Light, Heat & Power Co., Ltd., reported net of $599,444 in 1930, compared with $651,043 in 1929.

Supertest Petroleum Corp., Ltd., which operates a chain of more than 500 service stations in Ontario and Quebec reports net profits in excess of $500,000 in 1930, compared with profits in excess of $475,000 in 1929. Exact figures are not given. Gross sales were $3,451,005 in 1930; $2,601,446 in 1929, and $2,216,193 in 1928. The company paid regular dividends of 80 cents a share in 1930 and an extra of 50 cents a share Jan. 1.

English Secure More Stock In Irak Petroleum

LONDON, April 10.—It has just been announced that M. Golbenkian has disposed of his stock in the Irak Petroleum Co., in favor of the Anglo-Persian group. Although Golbenkian's stock does not exceed 6 per cent, the deal is very important since the Anglo Persian Oil Co., and the Irak Government, with 23.5 per cent each, with the additional 6 per cent controlled by Anglo-American, are now able to secure a clear majority against other stockholders—the French and American groups. which hold 23.5 each.

Some importance is attached to the conversation which Sir John Cadman had recently in Baghdad with King Feisul. It is reported that Sir John and the King reached a decision that the pipe line would have to be built towards Haifa.

Goldbenkian was given his stock when the Irak Petroleum Co. was organized because of early concessions he held in this territory.

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Refinery - Tank Wagon Markets

Gasoline Demand Increases in Some Districts; Prices Advance in Inland Markets

CLEVELAND, April 20

GASOLINE demand was on a slightly larger scale in most refining areas of the country during the week of April 13 to 18. Small gains in prices were reported in the more important inland markets. Seaboard gasoline prices hit new low levels. Light and heavy fuel oils lost considerable ground in all markets. Motor oil markets were featureless with the exception of the Pennsylvania market.

Weather conditions over most of the country continued exceptionally favorable for motoring, according to reports. Consumption to date has not been up to expectations, however, and the cry heard from oil traders generally was that motorists were not spending as freely this year. Nevertheless, consumption has increased and in areas where gasoline stocks are not as excessive as they are in other areas, prices have been quick to reflect even a slightly improved demand.

Improvement last week was particularly noticeable in Oklahoma and other Mid-Continent markets. The Oklahoma U. S. Motor gasoline price range moved up from 3.375 to 3.75 cents to 3.625 to 3.875 cents. Prices recorded similar gains in other districts of the Mid-Continent but lost some of their gains late in the week.

Jobber buying was reported much more active in several of the eastern seaboard markets. Distress gasoline, however, weighed heavily on the market and caused 0.25-cent price recessions at New York, Philadelphia and Baltimore.

Tank car markets for gasoline were 0.25 cent lower on the west coast also. U. S. Motor gasoline both for California and out-of-state shipment was quoted at 3 to 4 cents as against 3.25 to 4.25 cents the previous week.

Burning oil markets were quiet in all refining districts. Prices for the lighter oils receded 0.125 to 0.25 cent a gallon and for the heavier oils, approximately 2.5 cents a barrel.

Bulk market trading was quiet. Neither foreign nor domestic buyers showed much interest in buying.

Trading More Settled in Chicago Gasoline Market

Staff Special

CHICAGO, April 18

THE Chicago market was more settled during the week ended April 18 than it was during the previous week. The new low-priced gasoline offered by the Standard of Indiana still was the subject of much discussion and while it was thought that most distributors would sell a third grade of gasoline in competition, many still were in doubt as to what to offer at this price.

Another feature of the week was the reaction of the spot gasoline market to the cuts in retail prices. Tank car prices had fallen off 0.125 cent by the end of the previous week and many sellers and buyers thought they would take a further tumble. However, such was not the case, and the market apparently was steadier at the end of the week than at the beginning.

While the price range for U. S. Motor gasoline, as shown in the Chicago market in PLATT'S OILGRAM, remained at 3.25 to 3.75 cents all week, there seemed to be less Motor available at the low of the price range on April 18. Some sales also had been made at under 3.25 cents, but none was reported below this figure at the end of the week.

Carlot marketers generally reported advances of 0.125 to 0.25 cent in their buying prices. A few of them had reported purchases of full specification Motor at 3 cents early in the week, but there was none available at this figure later on. Many marketers reported that it was hard to buy even at 3.125 cents April 17 and 18. Several marketers said they had not been able to buy any U. S. Motor as low as 3 cents and while they would sell some goods at 3.25 cents, they had been getting 3.375 cents for the bulk of their sales.

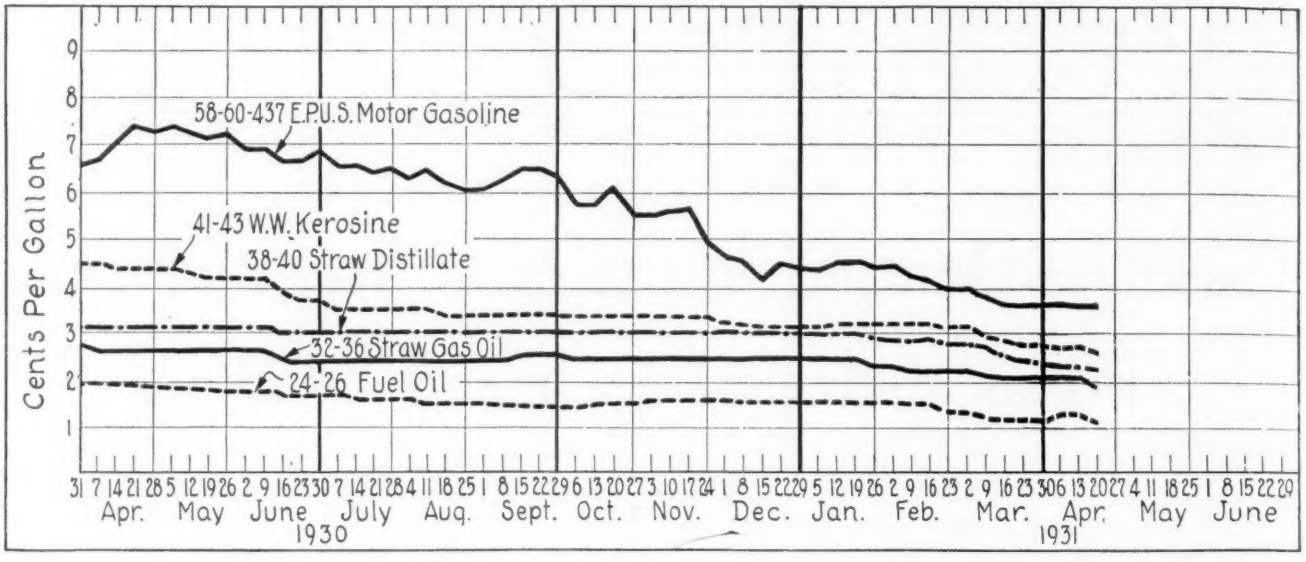
Refiners' quotations direct to jobbers ranged from 3.25 to 3.75 cents on April 18, although the majority asked at least 3.50 cents. Several refiners who had sold Motor at 3.25 cents raised their prices to 3.75 cents. One refiner, who had advanced to 3.75 cents early in the week, reduced his price later, due to lack of sales at the higher figure. Others said they had not had much difficulty getting shipping instructions even after advancing their prices.

Mild, sunny weather continued to prevail over most of the middle west and gasoline consumption was at a high level, according to reports. The tank car demand was good, both for spot and contract shipment.

Most sellers said that kerosine was inactive, although a few reported a fairly active demand. There was little change in tank car prices.

Distillate, gas and fuel oils showed their usual seasonal falling off in prices. Most grades were fractionally lower during the week in the face of light demand.

Current Prices of Principal Mid-Continent Refined Products


Cents Per Gallon
58-60-437 E.P.U.S. Motor Gasoline
41-43 W.W. Kerosine
38-40 Straw Distillate
32-36 Straw Gas Oil
24-26 Fuel Oil
Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1930
1931

Prices shown are in Group 3 basis and extended to date shown in Refinery Market Table Section of this issue

Pennzoil Markets New Anti-Knock Gasoline

CLEVELAND, April 18.—An anti-knock gasoline named Pennzip has been introduced by the Pennzoil Co. of Oil City, Pa., in its marketing territory in western Pennsylvania and through the territory of its controlled marketing company in northern Ohio, the Columbia Refining Co. of Cleveland. The gasoline is colored green. It sells at the price of regular gasoline.

In its introductory advertising the company has a drawing of an automobile with large wings. A line across the bottom of the five-column ads reads, "Add Wings to Your Motor with Pennzip."

TORONTO—Sales of the Crown Dominion Oil Co. in the first quarter of 1931 exceeded by 30 per cent, sales during the corresponding period of 1930. A new lubricating oil was responsible for a large part of the increase, according to reports.

Seep Closes Oil City Office

PITTSBURGH—South Penn Oil Co. is handling credit balances and transfer orders through its Pittsburgh offices since the closing April 1 of the Oil City office of the Joseph Seep Purchasing Agency. The Seep agency had been operating in Oil City for many years.

Sinclair Transfers Mobiline Trademark to Vacuum

NEW YORK, April 14.—An agreement entered into recently between the Sinclair Refining Co. and the Vacuum Oil Co. transfers to the latter company the rights here and abroad in the trademark "Mobiline" for motor oil which the Sinclair acquired when it purchased the Union Petroleum Co., of Philadelphia in 1919.

Due to the similarity of Mobiline with the Vacuum company's trademark "Mobiloil," the change was made to avoid confusion in the public mind, according to E. W. Sinclair, president of the Sinclair company and Charles E. Arnott, president of the Vacuum.

The Sinclair company will henceforth market its Pennsylvania grade motor oils under the name Sinclair Pennsylvania motor oil. These oils it had marketed under the Mobiline trade name since purchase of the Union Petroleum Co.

Shipments From Southern California

LOS ANGELES, April 16.—Shipments of bulk petroleum from southern California ports to Foreign and Atlantic Seaboard ports totaled 975,597 barrels for week ended April 11 as compared with a total of 1,340,596 barrels a week ago. Destination and quantity of shipments were as follows:

Destination	Crude	Gasoline	Diesel	Kerosine	Gas-Oil	Fuel	Total
Pacific For.	70,649	34,513	16,806	103,106	40,476	164,559	475,019
Atlantic Dom.	.....	225,908	.....	.....	.....	.....	225,908
Atlantic For.	.....	274,670	.....	.....	.....	.....	274,670

Prices 10 Years Ago
April 18, 1921

	Oklahoma	Penna.
58-60 U. S. Motor.....	16-25-17.00	20.25-20.75
80-84 Natural	11.00-12.25	.....
Kerosine (42-43 Okla.; 47 w. w. Pa.).....	4.00-4.25	8.00-8.25
Fuel Oil (24-26 Okla.; 36-40 Pa.)	$0.70-$0.80	4.50-4.75
Crude (Okla. 35-35.9)..	$1.75	$3.25
Chicago tank wagon (no state tax)		23.00c

Prices A Year Ago
April 21, 1930

	Oklahoma	Penna.
58-60 U. S. Motor.....	7.4107	7.875-8.25c
Grade A Natural	6.50-6.625	.....
Kerosine (Okla. 41-43; Pa. 47 w. w.)	4.25-4.50c	6.25-6.50c
Fuel Oil (Okla. 24-26; Pa. 36-40)	$0.775-$0.80	4.00-4.375
Crude (Okla. 35-35.9)..	$1.255	$3.00
Chicago tank wagon (including 3c tax)		18.00c

Mid-Continent Refinery Markets

Gasoline Prices Make Slight Gains

Staff Special
TULSA, April 18

THE Mid-Continent refined gasoline market gained a little ground during the week of April 13 to 18, but natural gasolines, and the burning and heating oils experienced fractional price reductions.

The slight advance in gasoline prices was the result of an improved demand in the marketing territories of the Mid-Continent refiners. Weather conditions on the whole were more favorable, and jobbers in many sections increased their takings on contract. In some instances there was increased spot buying. Some of the gasoline found its way into storage tanks in anticipation of the improved demand expected by next month. This buying for storage was taken as an indication jobbers were about convinced prices were on bottom.

Several refiners meanwhile were undecided just what would be their policy with reference to the competitive grade of gasoline to be offered by the Standard Oil Co. of Indiana. A few refiners already have made plans to meet this competition and have ordered additional equipment installed. Others said they will await further developments.

The installation of this additional equipment will require more gasoline for working stocks at the various bulk plants and was expected to react favorably on the gasoline stocks situation in the Mid-Continent.

Natural gasolines received little support during the week. None of the large buyers were interested in the market, and material continued to be offered freely for immediate shipment.

One large company which normally disposed of most of its production to its refining division, has been forced to remain almost inactive the past several weeks. The refinery officials were understood to have indicated they would need very little naturals for the next several weeks.

At the same time two other companies which have had the bulk of their output absorbed by refining divisions or subsidiary companies, have been pushing material on the market in sizable quantities. This situation meant the difference between a fairly well balanced market and one in which distress material was common.

Grade AA moved down to 1.75 cents late in the week, and some material with immediate instructions furnished, was moved from the Panhandle district at 1.625 cents a gallon, Group 3 freight basis. Most of the larger manufacturers were active in the market only to the extent of supplying their regular accounts, most of the shipments being applied against contracts. The bulk of the spot transactions were done by marketers.

Kerosines and distillates suffered as a result of lighter demand. Kansas refiners said kerosine demand was fair, but Oklahoma and Texas refiners experienced little spot buying. The market was comparatively tight in Arkansas and Louisiana because of the relative scarcity of the product in that territory. Refiners who make the oil, however, were experiencing some competition from the recently completed east Texas plants.

Gas oils experienced some sizable price reductions. Demand was extremely light in most quarters. Refiners who normally would require the oil for cracking apparently devoted their efforts more to consuming their own fuel oil in that manner. Industrial demand for gas oils remained light, and with warmer weather the zero oils were less active for home heating purposes.

Several grades of fuel oils experienced price reductions. Demand was extremely light. Bulk of shipments continued to be applied mostly against contracts. The "winter" demand for high gravity oils has dropped considerably, and many buyers have turned to the lower grades which can be as easily handled in the summer. There is an abundance of the lower grades of fuel and the increased buying of them has not been reflected in prices.

Refiners making bright stocks reported no changes were noted in either prices or demand. A few refiners with low cold test oils continued to meet the competition from other refiners who had higher cold test grades. Prices for all grades were almost on a parity.

Neutral oils demand was fair at generally unchanged prices. The zero cold test grades were comparatively scarce and moved more briskly than did the ordinary grades.

Wax prices remained at 2 to 2.25 cents for 124-126 white crude scale grade. Demand was fair, both for prompt and deferred shipments. Two or three refiners reported they were still well sold up for the next two or three weeks.

Phillips to Sell Lee Tires

NEW YORK, April 18.—Phillips Petroleum Co. has arranged to sell Lee tires at its 1600 service stations in the middle west. A plan is to be worked out for 8500 Phillips dealers to handle Lee tires.

CLEVELAND—Standard Oil Co. of Ohio has contracted with the Metropolitan Sound Studios for the production of 12 industrial talking pictures at Standard Oil plants for use in training employees. Four pictures have been completed.

May Build Refinery in St. John

TORONTO, April 15.—It is reported here that McColl-Frontenac Oil Co. will build a refinery at St. John, New Brunswick, in case merger negotiations with Cities Service Co. fail. The refinery would serve the maritime provinces of Canada.

Canada Has Them, Too

TORONTO—A proposal to increase the gasoline tax in British Columbia 1 cent per gallon has been made by the provincial government and protested by the Automobile Club of the province. Gasoline tax now is 5 cents per gallon in British Columbia.

Crude Price Changes

HOUSTON—On April 21 Humble Oil & Refining Co. made its initial posting for East Texas crude. It posted for crude in the new Sabine uplift region the same prices it had been paying for other North and North Central Texas crudes, with a minimum price of 43 cents for below 29 gravity, plus 2 cent differential for each succeeding degree of gravity to top grade of 40 and above, at 67 cents.

These same prices apply also on the older Mexia, Powell, Boggy Creek, Richland, Wortham and Currie fields where similar prices were previously paid.

Sabine uplift crude tests approximately 40 gravity.

On the same date, Humble reduced all other Texas crudes as follows: Ranger, North Texas, Moran and Cooke counties, an average of 10 cents per barrel, posting below 29 gravity at 33 cents, plus a 2 cent differential for each succeeding grade up to top grade of 40 and above at 57 cents.

Panhandle: Gray, Carson and Hutchinson counties, cut approximately 10 cents per barrel. Gray county below 35 gravity, 33 cents, plus 2 cent differential to top grade of 40 and above at 45 cents. Carson-Hutchinson counties, below 35 gravity, 30 cents, plus 2 cent differential, to top grade of 40 and above at 42 cents.

West Texas: Winkler and Pecos cut 5 cents, to new price of 35 cents per barrel. Crane, Upton, Crockett and other West Texas crudes, cut 5 cents, to new price of 30 cents. Lea county,

(*Continued on next page*)

Comparative Prices of 58-60 U. S. Motor Gasoline, 437 E. P., Group 3 and Point of Origin, to Jobbers Only

In Effect April 20

	Price F.O.B. Group 3	*Price F.O.B. Point of Origin*	*If for Particular Destination*
Oklahoma	3.625–3.875	3.625–3.875	
Kansas	3.625–3.75		S. O. Neb. & Indiana Territories, etc.
Kansas		3.875–4.125	Kansas only.
North Texas	3.50 –3.625	3.50 –3.625	
West Texas	3.375–3.50	3.375–3.50	
Louisiana-Arkansas	3.50 –3.75		Michigan, Ohio and Indiana.
Louisiana-Arkansas		3.75 – 4.00	State or differential haul.
Indiana-Illinois	3.375–3.75	*	S. O. Indiana territory except Detroit and vicinity. For Ohio on delivered basis only.

*Shipments made from Indiana and Illinois refineries, according to conditions and freight rates; no prices F. O. B. point of origin can be given.

Chicago Tank Car Market

CHICAGO, April 18

THE Chicago market was more settled the past week. The spot market showed an "about face" as compared with the previous week and sentiment among the trade was largely bullish by the end of the week. Although the price range for U. S. Motor still was 3.25 to 3.75 cents, there was less gasoline being offered at the low of the range and apparently none under that figure on April 18. Several traders who still offered Motor at 3.25 cents intimated they would advance their prices early next week. Other products did not show much change over the week.

Following prices represent majority of sales made on Group 3 freight basis, although shipments may originate in other refining districts, such as North and West Texas, Louisiana, Arkansas, Indiana, Illinois, Kentucky, etc.

	Prices April 20	Prices April 13	Prices April 6
58-60 U. S. Motor, 437 e.p.	3.375– 3.75	3.25 – 3.75	3.375– 3.75
†56-62 400-437 e.p. anti-knock gasoline	3.75 – 4.875	3.75 – 4.875	3.75 – 4.875
60-62 437 e.p. gasoline	3.375– 3.75	3.375– 3.75	3.50 – 3.875
60-62 400 e.p. gasoline	3.50 – 3.875	3.50 – 3.875	3.625– 4.00
64-66 375 e.p. gasoline	4.00 – 4.25	4.00 – 4.375	4.125– 4.375
68-70 350-360 e.p. gasoline	4.375– 4.75	4.375– 4.875	4.375– 4.875
*Domestic Aviation Gasoline	5.75 – 6.125	5.75 – 6.125	5.75 – 6.125
41-43 w.w. kerosine	2.625– 2.875	2.625– 3.00	2.625– 3.00
42-44 w.w. kerosine	2.75 – 3.00	2.75 – 3.00	2.875– 3.125
38-40 p. w. distillate	2.25 – 2.375	2.25 – 2.50	2.25 – 2.50
38-40 straw distillate	2.125– 2.375	2.25 – 2.375	2.25 – 2.375
32-36 ordinary dark gas oil	1.25 – 1.50	1.375– 1.50	1.375– 1.50
32-36 dark zero gas oil	1.875– 2.125	1.875– 2.125	2.00 – 2.125
32-36 straw zero gas oil	2.00 – 2.25	2.00 – 2.25	2.125– 2.25
28-30 zero fuel oil (per bbl.)	$0.725–$0.75	$0.75 –$0.775	$0.75 –$0.775
28-30 fuel oil (per bbl.)	$0.70 –$0.75	$0.725–$0.775	$0.75 –$0.775
24-26 fuel oil (per bbl.)	$0.475–$0.55	$0.50 –$0.575	$0.525–$0.575
18-22 fuel oil, low sulfur (per bbl.)	$0.375–$0.45	$0.40 –$0.45	$0.425–$0.475
18-22 fuel oil, high sulfur zero (per bbl.)	$0.425–$0.45	$0.425–$0.475	$0.45 –$0.475
14-16 fuel oil (per bbl.)	$0.35 –$0.40	$0.35 –$0.40	$0.375–$0.425

*Prices are based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167° F., and not less than 122° F.; 50% recovery at 221°; 90% at 311°; 96% at 347°; end point 374° F. Gasoline of fighting grade specifications in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

†Over 45% benzol equivalent. Prices represent quotations and sales.

Crude Price Changes (Continued)

N. Mex., cut 7.5 cents, to new price of 32.5 cents.

South and southwest Texas: Mirando cut 9 cents, to new price of 60 cents. Salt Flat and Darst Creek cut 7 cents, to new price of 53 cents. Pettus, cut 20 cents, to new price of 75 cents per barrel.

Gulf Coast: A and B grades, cut 10 cents, to new price of 70 cents. B light grades, cut 9 to 20 cents, with minimum grade of below 25 posted at 60 cents, 25-25.9 at 61 cents, and from then on, a 2 cent differential for each succeeding degree of gravity up to top grade of 35 and above, which is 81 cents. Top grade formerly was 40 and above at $1.01.

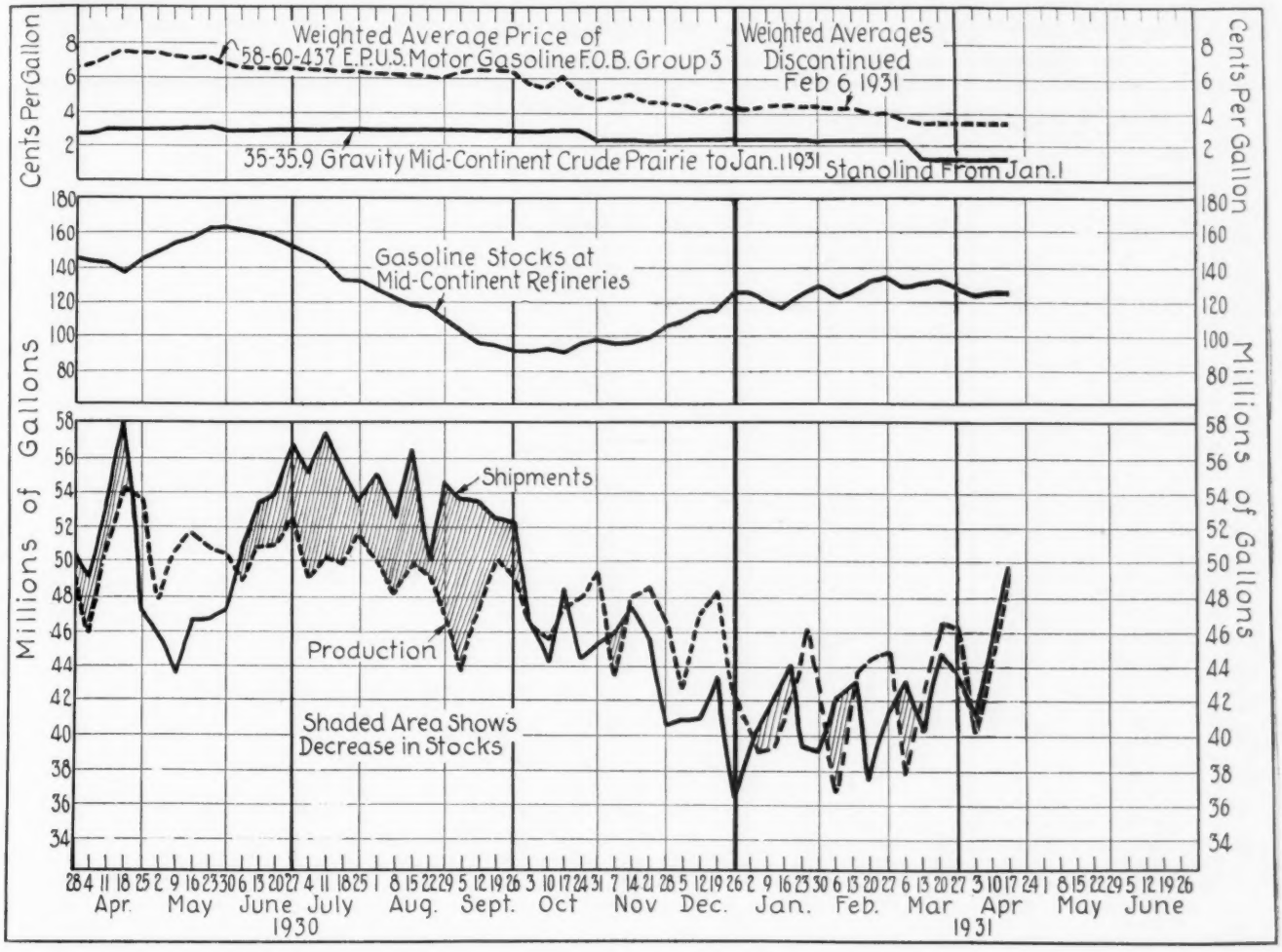
Refugio heavy crude was cut 9 cents to new price of 60 cents; Refugio light crude, beginning with 25-25.9 gravity, same gravity and price schedule as other Gulf Coast B grades.

Announcement was also made that the Humble Pipe Line Co. is reducing its tariff and delivery cost by approximately 20 per cent. In posting the new prices and reducing the tariff and delivery cost, the parent Humble Oil & Refining Co. is attempting to equalize all crudes at the seaboard.

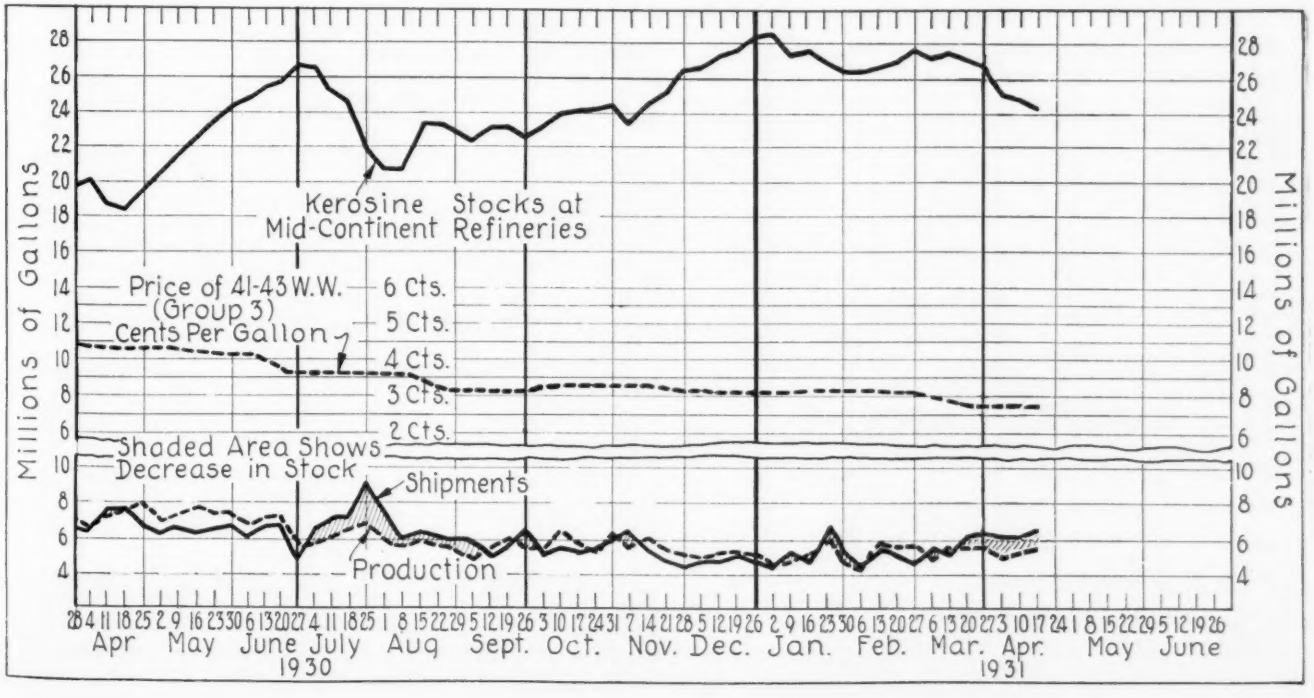
Last previous change on North and North Central Texas crude, Panhandle, West, south and southwest Texas and New Mexico crudes was on March 10, cuts ranging from 5 to 40 cents in the various fields; on Gulf Coastal crude, Jan. 14, cuts of 20 and 21 cents.

Barometer of Mid-Continent Refinery Market—Week Ending April 17

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


Cents Per Gallon
Weighted Average Price of 58-60-437 E.P.U.S. Motor Gasoline F.O.B. Group 3
Weighted Averages Discontinued Feb 6 1931
35-35.9 Gravity Mid-Continent Crude Prairie to Jan. 1 1931
Stanolind From Jan. 1
Gasoline Stocks at Mid-Continent Refineries
Millions of Gallons
Shipments
Production
Shaded Area Shows Decrease in Stocks
Apr May June July Aug. Sept. Oct Nov Dec. Jan. Feb. Mar Apr May June
1930
1931

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in the table on page 74



Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

OKLAHOMA (F. o. b. Oklahoma refineries)

	Prices April 20	Prices April 13	Prices April 6
48-50 450 e.p. naphtha	3.125– 3.375	3.125– 3.375	3.50 – 3.75
50-52 450 e.p. naphtha	3.125– 3.375	3.125– 3.375	3.50 – 3.75
56-58 450 e.p. gasoline	3.125– 3.375	3.125– 3.375	3.50 – 3.625
58-60 450 e.p. gasoline	3.125– 3.375	3.125– 3.375	3.50 – 3.625
58-60 U.S. Motor 437 e.p.	3.625– 3.875	3.375– 3.875	3.50 – 4.00
60-62 437 e.p. gasoline	3.625– 4.00	3.50 – 4.00	3.625– 4.125
60-62 400 e.p. gasoline	3.75 – 4.25	3.625– 4.125	3.75 – 4.25
64-66 390 e.p. gasoline	4.125– 4.375	4.00 – 4.25	4.25
64-66 375 e.p. gasoline	4.375– 4.50	4.25	4.25 – 4.50
68-70 350-360 e.p. gasoline	4.50 – 4.625	4.625	4.75 – 4.875
‡Domestic Aviation Gasoline	5.25 – 6.00	5.25 – 6.00	5.25 – 6.00

‡Prices based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167° F., and not less than 122° F.; 50% rec. at 221°; 90% at 311°; 96% at 347°; end point, 374°F. Fighting grade in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

52-54 Naphtha	5.125– 5.25	5.125– 5.50	5.125– 5.50
54-56 Naphtha	5.125– 5.25	5.125– 5.50	5.125– 5.50
58-60 U.S. Motor 437 e.p.	5.125– 5.50	5.125– 5.50	5.25 – 5.50
60-62 400-410 e.p. gasoline	5.375– 5.625	5.375– 5.625	5.50 – 5.75
64-66 390 e.p. gasoline	5.75 – 6.25	5.75 – 6.25	6.00 – 6.25
68-70 350-360 e.p.	6.50 – 7.00	6.50 – 7.00	6.75 – 7.25

OHIO (Quotations of S. O. Ohio. 4c state tax to be added.)

U. S. Motor Gasoline			
Ohio, delivery at any point	8.00	8.00	8.00

KANSAS (F. o. b. refinery Kansas destination)

58-60 U.S. Motor 437 e.p.	3.875– 4.125	4.00 – 4.25	4.00 – 4.25
60-62 437 e.p. gasoline	4.00 – 4.25	4.125– 4.375	4.125– 4.375
60-62 400 e.p. gasoline	4.125– 4.375	4.25 – 4.50	4.25 – 4.50
64-66 375 e.p. gasoline	4.625– 4.875	4.75 – 5.00	4.75 – 5.00

NORTH TEXAS (F. o. b. North Texas refineries)

56-58 450 e.p. gasoline	3.00 – 3.25	3.00 – 3.25	3.375– 3.50
58-60 450 e.p. gasoline	3.00 – 3.25	3.00 – 3.25	3.375– 3.50
58-60 U.S. Motor 437 e.p.	3.50 – 3.625	3.375– 3.625	3.375– 3.625
60-62 400 e.p. gasoline	3.625– 4.00	3.625– 4.00	3.625– 4.00
64-66 390 e.p. gasoline	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
64-66 375 e.p. gasoline	4.25 – 4.50	4.25 – 4.50	4.25 – 4.50
68-70 350-360 e.p. gasoline	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75

****WEST TEXAS** (F. o. b. West Texas refinery, for unrestricted shipment)

50-52 naphtha	3.00 – 3.25	3.375– 3.50	3.375– 3.50
58-60 437 e.p. gasoline	3.25 – 3.375	3.375– 3.50	3.375– 3.50
58-60 U.S. Motor 437 e.p.	3.375– 3.50	3.375– 3.625	3.375– 3.625

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

58-60 U.S. Motor 437 e.p.	4.00	4.00	4.00

ARKANSAS (Ark., N. La. and Miss. destination)

58-60 U.S. Motor 437 e.p.	3.75 – 4.00	4.00	4.00

CALIFORNIA (3c tax to be added to California gasoline prices if used in state.)

54-58 U.S. Motor 437 e.p.	3.00 – 4.00	3.25 – 4.25	3.25 – 4.50
54-58 U.S. Motor, for outside state shipment	3.00 – 4.00	3.75 – 4.25	3.25 – 4.50
58-61 375-400 e.p. gasoline	4.00 – 5.00	4.50 – 5.25	4.50 – 5.00
42-45 Engine Distillate 445-480 e.p.	3.00 – 4.00	3.75 – 4.25	3.75 – 4.50

NATURAL GASOLINE

(Note: End point of all grades, not over 375F. Corrosion test adopted Oct. 1, 1927; A.S.T.M. Method D130-27T; doctor test, July 2, 1928.)

OKLAHOMA (F. o. b. Oklahoma refineries)

Grade AA, 80-87.9, 90% Recovery	1.75	2.125– 2.25	2.25
Grade A, 72-79.9, 90% Recovery	1.875– 2.00	2.25 – 2.375	2.375– 2.50
Grade BB, 84-92, 85% Recovery	1.625	1.875– 2.00	1.875– 2.00
Grade B, 76-83.9, 85% Recovery	1.625	2.00 – 2.125	2.125
Grade C, 80-92, 78% Recovery	1.625	1.875	1.875– 2.00

NORTH TEXAS (F. o. b. Breckenridge)

	Prices April 20	Prices April 13	Prices April 6
Grade AA, 80-87.9, 90% Recovery	1.75	2.125– 2.25	2.25
Grade A, 72-79.9, 90% Recovery	1.875– 2.00	2.25 – 2.375	2.375– 2.50
Grade BB, 84-92, 85% Recovery	1.625	1.875– 2.00	1.875– 2.00
Grade B, 76-83.9, 85% Recovery	1.625	2.00 – 2.125	2.125
Grade C, 80-92, 78% Recovery	1.625	1.875	1.875– 2.00

NORTH LOUISIANA (F. o. b Monroe District)

Grade AA	†2.00	†2.25	†2.25
Grade BB	†1.875	†2.00	†2.00
Grade C	†1.875	†1.875	†2.00

CALIFORNIA (F. o. b. California refineries)

75-85, 375-390 e.p. for blending	2.50 – 3.00	2.75 – 3.25	3.25 – 4.00

BURNING OILS

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

45 w.w. kerosine	4.375– 4.50	4.375– 4.75	4.50 – 4.75
46 w.w. kerosine	4.625– 4.75	4.625– 5.00	4.75 – 5.25
47 w.w. kerosine	4.75 – 5.00	4.875– 5.125	5.00 – 5.25
300 mineral seal	5.25 – 5.50	5.25 – 5.50	5.25 – 5.50

OKLAHOMA (F. o. b. Oklahoma refineries)

41-43 w.w kerosine	2.625– 2.75	2.75 – 3.00	2.75 – 3.00
42-44 w.w. kerosine	2.875– 3.125	3.00 – 3.25	3.00 – 3.25

KANSAS (F. o. b. refinery Kansas destination)

41-43 w.w. kerosine	3.00 – 3.25	3.125– 3.25	3.25
42-44 w.w. kerosine	3.50	3.375– 3.50	3.50

NORTH TEXAS (F. o. b. North Texas refineries)

40-42 w.w. kerosine	2.50	2.50 – 2.625	2.50 – 2.625
41-43 w.w. kerosine	2.625	2.625– 2.875	2.625– 2.875

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

41-43 w.w. kerosine	3.50	3.50	3.50
42-44 w.w. kerosine	3.75	3.75	3.75

ARKANSAS (Ark., N. La. and Miss. destination)

41-43 w.w. kerosine	3.50	3.50	3.50

CALIFORNIA (F. o. b. California refineries)

38-40 w.w. kerosine	4.00 – 4.50	4.00 – 5.00	4.00 – 5.50

NEUTRAL OIL

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

Vis.		(Viscosity at 70° F.)	
200 No. 3 Assoc. Filt.	22.00 –22.50	22.00 –23.00	†22.00 –23.00
180 No. 3 Assoc. Filt.	19.00 –19.50	19.00 –20.00	†19.00 –20.00
150 No. 3 Assoc. Filt.	17.00 –17.50	17.00 –18.00	†17.00 –18.00

Note: Low cold test neutral oils are quoted approximately 6c per gal. higher than prices shown above.

	(Non Viscous)		
34 Grav. 330-340 Flash	5.25 – 6.00	5.25 – 6.00	5.25 – 6.00

****MID-CONTINENT** (F. o. b. Mid-Continent refineries)

Vis. Color		(Viscosity at 100° F.)	
100—No. 2	5.25	5.25	5.25
150—No. 3	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
150—No. 4	6.50	6.50	6.50
180—No. 3	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
180—No. 4	7.75 – 8.00	7.75 – 8.00	7.75 – 8.00
180—No. 5	7.50	7.50	7.50
200—No. 3	9.50	9.50	9.50
200—No. 4	8.50	8.50	8.50
200—No. 5	8.25	8.25	8.25
220—No. 3	10.00 –10.50	10.00 –10.50	10.00 –10.50
220—No. 4	9.75 –10.25	9.75 –10.25	9.75 –10.25
220—No. 5	10.00 –10.25	10.00 –10.25	10.00 –10.25
240—No. 3	12.00	12.00	12.00
240—No. 4	10.50	10.50	10.50
240—No. 5	10.50 –11.00	10.50 –11.00	10.50 –11.00
280—No. 3	14.00	14.00	14.00
280—No. 4	13.00	13.00	13.00
280—No. 5	12.00	12.00	12.00

Note: Quotations for 0 to 10 cold test neutral oils are 1 to 2 cents higher depending on the grade.

****Prices represent Quotations and Sales.**

††Only one refiner quoting ***Quotations only**

Refinery Markets Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

GULF COASTAL (F. o. b. Gulf Coastal refineries)

Vis. Color	Prices April 20 (Viscosity at 100° F., pour test 0)	Prices April 13	Prices April 6
100—No. 2 Pale	5.50 – 6.25	5.50 – 6.25	5.50 – 6.25
200—No. 3 Pale	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
300—No. 3 Pale	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
500—No. 3½ Pale	10.00 –10.50	10.00 –10.50	10.00 –10.50
750—No. 4 Pale	11.50 –12.50	11.50 –12.50	11.50 –12.50
1200—No. 4 Pale	14.50 –15.00	14.50 –15.00	14.50 –15.00
2000—No. 4-5 Pale	15.50 –16.00	15.50 –16.00	15.50 –16.00
200—No. 5½ Red Oil	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
300—No. 5½ Red Oil	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
500—No. 6 Red Oil	9.00 –10.00	9.00 –10.00	9.00 –10.00
750—No. 6 Red Oil	11.25 –11.75	11.25 –11.75	11.25 –11.75
1200—No. 5-6 Red Oil	13.50 –14.00	13.50 –14.00	13.50 –14.00
2000—No. 6 Plus Red Oil	15.50 –16.00	15.50 –16.00	15.50 –16.00

‡CALIFORNIA (F. o. b. California refineries)

Vis. Color	(Viscosity at 100° F.)		
100—No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200—No. 3	11.50	11.50	11.50
300—No. 3	13.00	13.00	13.00
450—No. 3	15.50	15.50	15.50
550—No. 3	16.50	16.50	16.50
600—No. 3	17.00	17.00	17.00
200—No. 5	11.00	11.00	11.00
300—No. 5	12.00	12.00	12.00
400—No. 5	14.00	14.00	14.00
500—No. 5	15.00	15.00	15.00
600—No. 5	16.00	16.00	16.00
700—No. 7	18.00	18.00	18.00

‡Neutral oils not manufactured commercially in California.

CYLINDER STOCKS

MID-CONTINENT (F. o. b. Mid-Continent refineries)

(Cylinder stock prices represent quotations and sales to domestic jobbers only).

190-200 Vis. D at 210° Brt. St.	20.00	20.00	23.00
150-160 Vis. D at 210° Brt. St., 0-10 cold test	14.50 –16.00	14.50 –16.00	16.00 –18.00
150-160 Vis. D at 210° Brt. St., 10-25 cold test	14.50 –15.00	14.50 –15.00	15.00 –16.00
150-160 Vis. D Brt. Stock, 25-40 cold test	14.00 –14.50	14.00 –14.50	14.50 –15.00
150-160 Vis. E 210° Brt. St.	13.50 –14.50	13.50 –14.50	15.00 –16.00
600 St. Ref. Olive Green	6.00 – 8.00	6.00 – 8.00	6.00 – 8.00
600 St. Ref. Dark Green	4.50 – 5.50	4.50 – 5.50	4.50 – 5.50
Black Oil	4.00 – 5.00	4.00 – 5.00	4.00 – 5.00

PENNSYLVANIA (F. o. b. Western Penna. refineries) (A.S.T.M. Tests)

600 Steam Refined, filterable	8.00 – 8.75	8.25 – 8.75	8.25 – 8.75
650 Steam Refined	11.50 –12.00	11.50 –12.00	11.50 –12.00
600 Flash	12.50 –13.00	12.50 –13.50	12.50 –13.50
630 Flash	18.00 –20.00	18.00 –20.00	18.00 –20.00
600 Warren E	12.00 –12.50	12.00 –13.00	12.00 –13.00
600 Oil City E			†12.00 –12.50
600 D Filtered	†14.50 –15.00	†14.50 –15.00	†14.50 –15.00
Cold Test Stocks, 140-150 vis. at 210°, 540-550 flash, No. 8 color, ‡20 pour test and below	18.00 –19.00	18.00 –19.00	18.50 –19.00
No. 8 color, ‡25 and 35 pour test	17.50 –18.00	18.00 –19.00	18.00 –19.00
No. 8 color, ‡40 pour test and above	17.50 –18.00	17.50 –18.00	17.50 –18.00

‡Beginning March 16, pour tests changed to those shown above. Were formerly: 25 pour test; 25-35 pour test; and above 35 pour test, respectively.

WAX

PENNSYLVANIA (Per pound, F. o. b. New York)

122-124 white crude scale a.m.p.	2.125– 2.25	2.25	2.25 – 2.375
124-126 white crude scale, a.m.p.	2.125– 2.25	2.25	2.25 – 2.375

****OKLAHOMA** (Per pound in barrels; in a few instances, per pound in burlap bags; F. o. b. Oklahoma refineries.)

124-126 White Crude Scale, a.m.p.	2.00 – 2.25	2.00 – 2.25	2.00 – 2.125

DISTILLATE, GAS AND FUEL OIL

PENNSYLVANIA (For outside Pittsburgh district)

36-40 fuel oil	2.75 – 2.875	2.875– 3.25	2.875– 3.25
30-34 fuel oil	2.75 – 2.875	2.75 – 3.00	2.875– 3.00
28-32 fuel oil	2.75 – 2.875	2.75 – 3.00	2.875– 3.00

†Prices nominal ††Only one refiner quoting *Quotations only

OKLAHOMA (F. o. b. Oklahoma refineries)

	Prices April 20	Prices April 13	Prices April 6
38-40 straw distillate	2.125– 2.375	2.25 – 2.50	2.25 – 2.50
36-38 straw distillate	2.00 – 2.125	2.125– 2.25	2.25 – 2.375
32-36 straw gas oil	1.75 – 2.00	2.00 – 2.125	2.00 – 2.25
32-36 straw gas oil zero	2.00 – 2.125	2.125– 2.375	2.25 – 2.375
32-36 dark gas oil	1.25 – 1.50	1.75	1.75
32-36 dark gas oil zero	1.75 – 2.00	2.00 – 2.125	2.00 – 2.25
28-30 zero fuel oil (per bbl.)	$0.725–$0.775	$0.725–$0.775	$0.775–$0.825
28-30 fuel oil (per bbl.)	$0.70 –$0.75	$0.70 –$0.75	$0.75 –$0.80
26-28 fuel oil (per bbl.)	$0.60 –$0.70	$0.60 –$0.70	$0.65 –$0.70
24-26 fuel oil (per bbl.)	$0.475–$0.525	$0.50 –$0.55	$0.50 –$0.55
22-26 fuel oil (per bbl.)	$0.45 –$0.50	$0.475–$0.50	$0.475–$0.50
18-22 fuel oil (per bbl.)	$0.40 –$0.45	$0.425–$0.45	$0.425–$0.45
16-20 fuel oil (per bbl.)	$0.375–$0.40	$0.375–$0.425	$0.375–$0.425
14-16 fuel oil (per bbl.)	$0.35 –$0.40	$0.35 –$0.40	$0.35 –$0.40

KANSAS (F. o. b. refinery Kansas destination)

38-40 straw distillate	2.625– 2.75	2.75 – 3.00	2.75 – 3.00
36-38 straw distillate	2.50	2.50 – 2.75	2.625– 2.75
32-36 straw gas oil	2.25 – 2.50	2.375– 2.625	2.50 – 2.625
18-22 fuel oil (per bbl.)	$0.50 –$0.60	$0.50 –$0.60	$0.50 –$0.60
10-14 fuel oil (per bbl.)	$0.40 –$0.45	$0.40 –$0.45	$0.40 –$0.45

NORTH TEXAS (F. o. b. North Texas refineries)

38-40 straw distillate	2.25 – 2.375	2.25 – 2.50	2.25 – 2.50
38-40 p.w.treated distillate	2.25 – 2.50	2.25 – 2.625	2.25 – 2.625
32-36 gas oil, cracked	1.50 – 1.75	1.75 – 2.00	1.75 – 2.00
32-36 St. reduced gas oil	1.25 – 1.50	1.50 – 1.75	1.50 – 1.75
24-26 fuel oil (per bbl.)	$0.375–$0.425	$0.375–$0.425	$0.375–$0.425
20-24 fuel oil (per bbl.)	$0.35 –$0.40	$0.35 –$0.40	$0.35 –$0.40
18-22 fuel oil (per bbl.)	$0.325–$0.35	$0.325–$0.35	$0.325–$0.35

****WEST TEXAS** (F. o. b. West Texas refinery, for unrestricted shipment.

34-38 gas oil	1.75	1.875– 2.00	1.875– 2.00
30-32 gas oil	1.00 – 1.25	1.50	1.50
28-30 zero gas oil	1.50 – 1.75	2.00 – 2.125	2.00 – 2.125
18-22 fuel oil (per bbl.)	$0.375–$0.40	$0.375–$0.40	$0.375–$0.40

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

32-36 gas oil, dark	2.375– 2.50	2.375– 2.50	2.375– 2.50
32-36 gas oil, straw	2.375– 2.50	2.375– 2.50	2.375– 2.50
14-16 fuel oil (per bbl.)	$0.60 –$0.675	$0.60 –$0.675	$0.60 –$0.70

ARKANSAS (Ark., N. La. and Miss. destination)

32-36 gas oil, straw	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
32-36 dark gas oil	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
28-30 gas oil	2.125– 2.25	2.125– 2.25	2.125– 2.25
20-24 fuel oil (per bbl.)	$0.75	$0.75	$0.75
9-12 fuel oil (per bbl.)	$0.65	$0.65	$0.65
Black oil	3.25	3.25	3.25

CALIFORNIA (F. o. b. San Joaquin Valley. Nominal pipe line charge to San Francisco 24c per bbl. more and to San Pedro 20c per bbl. more.)

14-18 fuel oil (per bbl.)	$0.35 –$0.50	$0.35 –$0.50	$0.35 –$0.50
14-18 Bunker oil (per bbl.)	$0.55 –$0.80	$0.55 –$0.80	$0.55 –$0.80
30-34 gas oil (per bbl.)	$0.70 –$0.80	$0.70 –$0.80	$0.70 –$0.80
27 Plus Diesel oil (per bbl.)	$0.70 –$0.80	$0.70 –$0.80	$0.70 –$0.80

PETROLATUMS

PENNSYLVANIA (Per pound, in barrels, carload lots, f. o. b. Penna. refinery. In tank cars 3/8c to 3/4c per pound less.) Two refiners quoting.

Snow White	6.50 – 7.25	7.00 – 7.25	7.00 – 7.25
Lily White	5.125– 6.00	6.125– 6.25	6.125– 6.25
Cream White	4.125– 5.00	5.125– 5.25	5.125– 5.25
Light Amber	2.625– 3.00	2.875– 3.00	2.875– 3.00
Amber	2.375– 2.75	2.625– 2.75	2.625– 2.75
Red	1.875– 2.50	2.00 – 2.50	2.00 – 2.50

PETROLEUM COKE

****OKLAHOMA** (F. o. b. Oklahoma refineries)

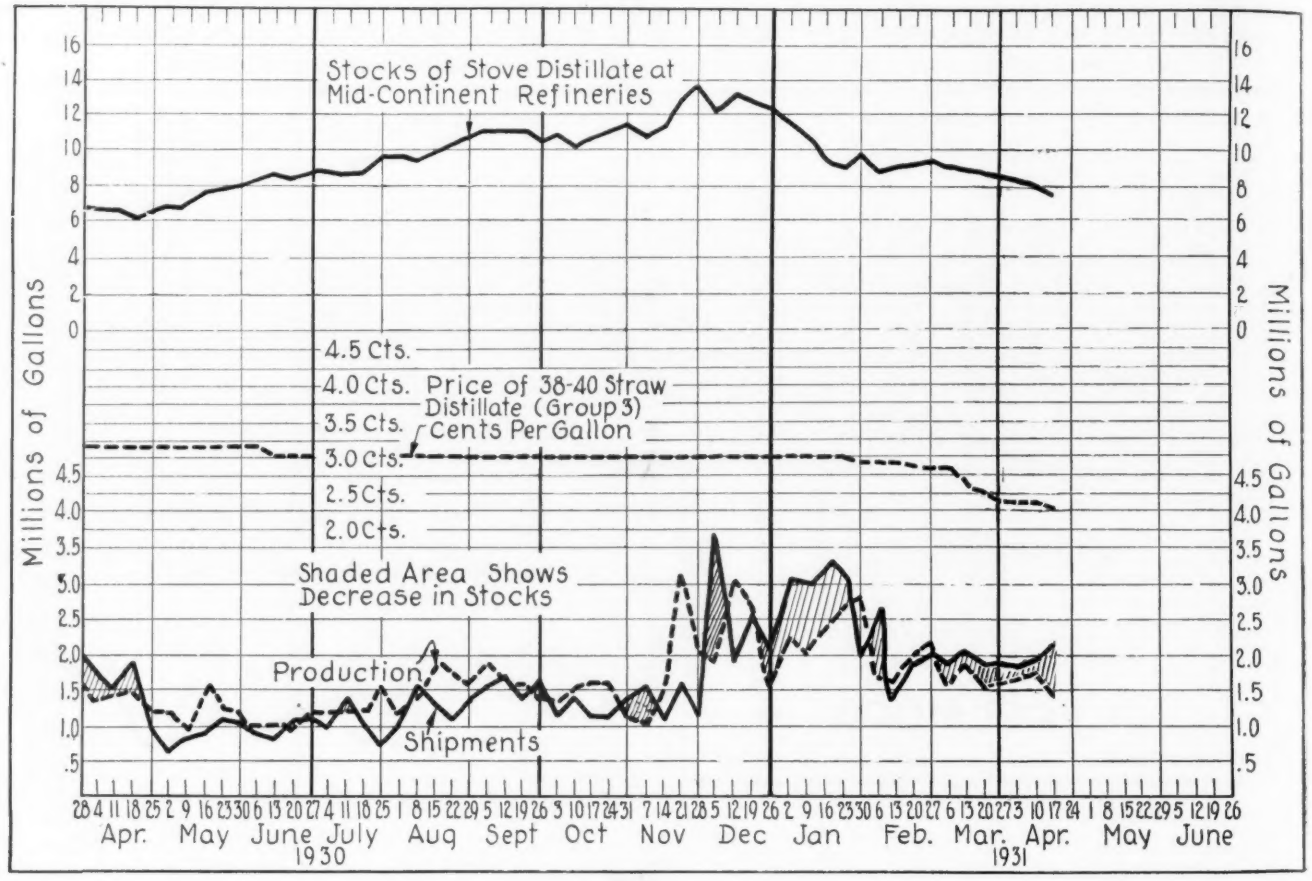
(Per ton in car lots)

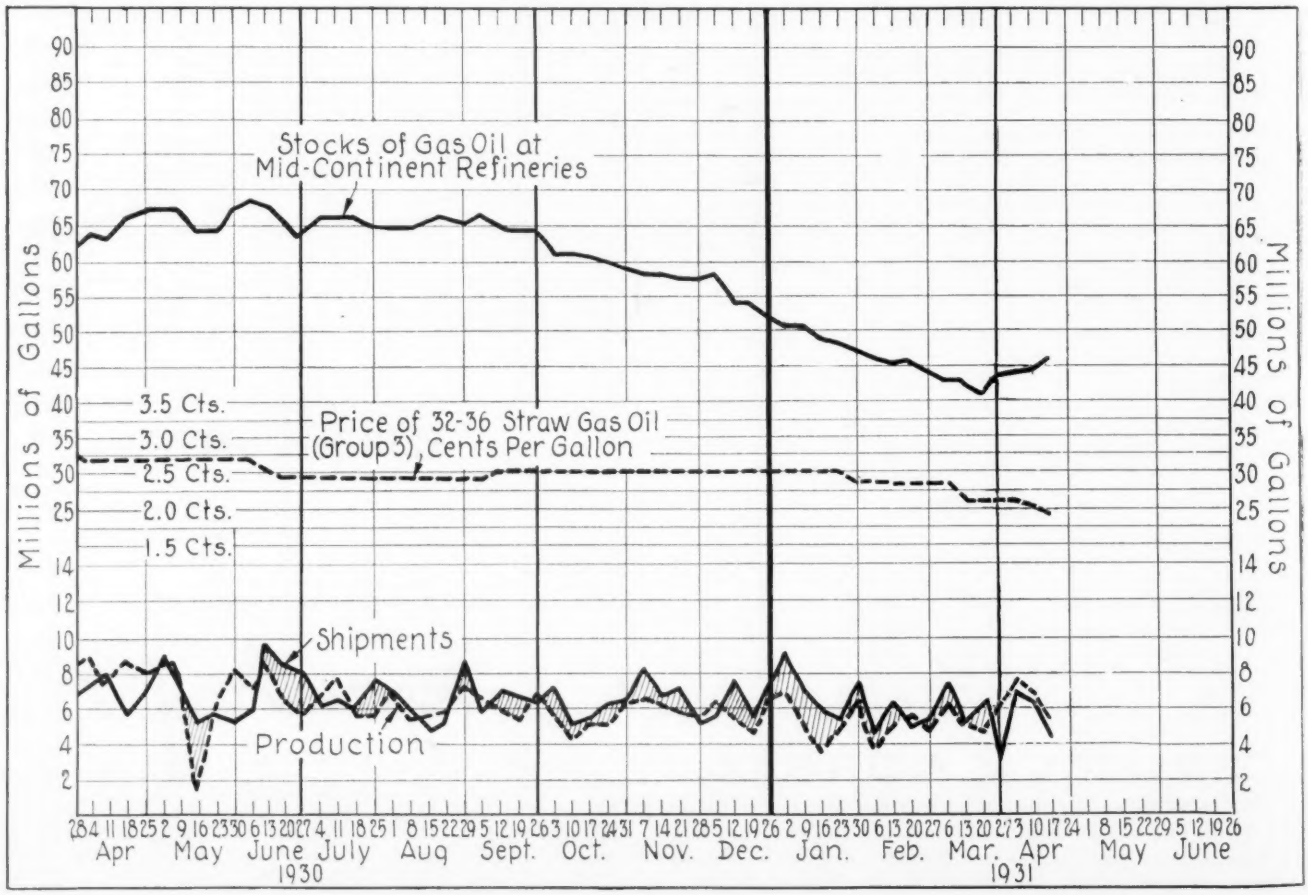
Lump	$4.50 –$5.00	$4.50 –$5.00	$4.50 –$5.00
Still run	$3.00	$3.00	$3.00
Breeze	$2.00	$2.00	$2.00

****Prices represent Quotations and Sales**

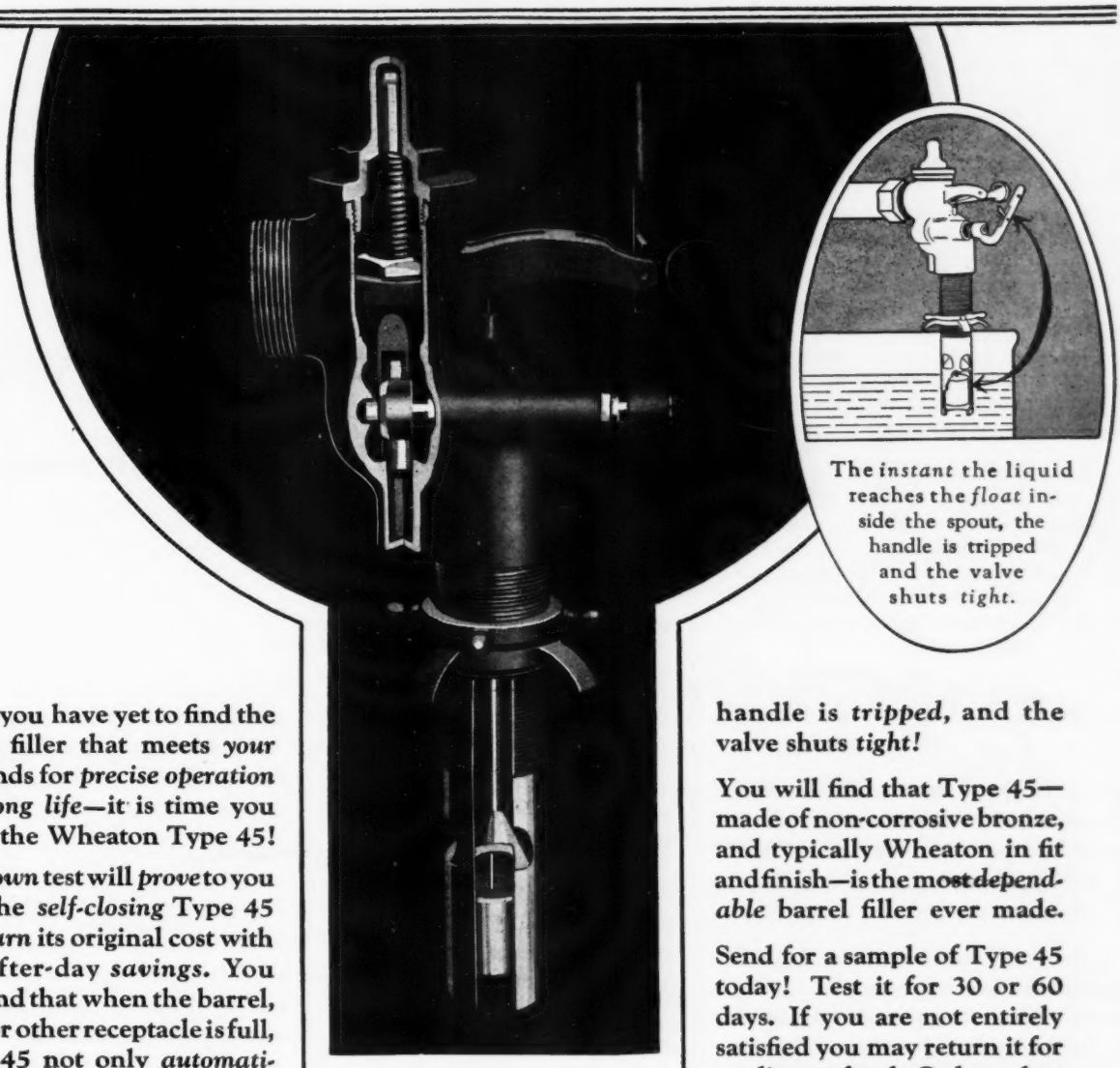
Barometer of Mid-Continent Refinery Market—Week Ending April 17

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News





If you are looking for a BETTER Barrel Filler~



The *instant* the liquid reaches the *float* inside the spout, the handle is tripped and the valve shuts *tight*.

IF you have yet to find the barrel filler that meets *your* demands for *precise operation* and *long life*—it is time you knew the Wheaton Type 45!

Your own test will *prove* to you that the *self-closing* Type 45 will *earn* its original cost with day-after-day *savings*. You will find that when the barrel, tank or other receptacle is full, Type 45 not only *automatically* shuts off, but that the very *instant* the liquid reaches the *float* inside the spout, the handle is *tripped*, and the valve shuts *tight!*

Wheaton Type 45 Barrel Filler

Type 45 works equally well with gasoline, kerosene and lubricating oil. And, by means of an *adapter*, it can be used with standard iron pipe thread, as well as special hose thread.

You will find that Type 45—made of non-corrosive bronze, and typically Wheaton in fit and finish—is the most *dependable* barrel filler ever made.

Send for a sample of Type 45 today! Test it for 30 or 60 days. If you are not entirely satisfied you may return it for credit or refund. Order today.

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California Refinery Market

Interest Dies Down in Cargo Market

LOS ANGELES, April 18

PROMISING inquiries reported in the California bulk market a week ago had failed to materialize as the week ended and exporters were not encouraged by the prospect of immediate business. Considerable interest was evidenced, however, in heavy oils and indications were that slightly lower prices would result in the sale of cargo fuel and gas oils.

An east coast buyer was shopping in the local market for a cargo of asphalt base crude oil at the market price, preferably high gravity oil but offers to take the business were lacking.

Bids have been opened for approximately 5,500,000 barrels of fuel oil, and 134,000 barrels of diesel oil to supply west coast needs of the U. S. Navy during 1931-1932. The bids for current quotations specify bunker "B" fuel instead of bunker "C." It is understood this change was necessary because of a considerable quantity of extremely heavy fuel oil delivered under the more lenient specification that could not be used in the cold climate of the northwest.

At San Pedro, the successful bids a year ago for approximately 4,000,000 barrels were $0.535 for 700,000 barrels, $0.59 for 300,000 barrels, $0.64 for 2,000,000 barrels, and $0.70 for the balance. Requirements for the future in this area have been reduced to 3,500,000 barrels. Some traders believe bids for the new contracts will shade $0.60 per barrel and possibly $0.55 at San Pedro.

Warm weather on the west coast has created a good demand for gasoline. Quotations, however, for tank car deliveries fell to new low levels as refiners sought to retain gallonage. With a range of 3 to 4 cents prevailing for delivery both in and out of the state, exclusive of tax, a majority of the sales were made at 3.50 up.

The warm weather resulted in less demand for natural gasoline with a consequent shading of quotations. Several sellers were willing to quote as low as 2.25 cents for this commodity with prices generally ranging from 2.50 to 3 cents.

Although kerosine stock was reported available at 2.50 cents, water white kerosine was quoted at 4 to 4.50 cents. Demand for this commodity has been on the wane for several weeks.

Practically no change was noted in quotations for heavy oils. Fuel oil continued at $0.35 to $0.50 per barrel and gas and diesel oils at $0.70 to $0.80.

Ford, Bacon & Davis Forms New Company

NEW YORK, April 18.—All contract construction for Ford, Bacon & Davis, Inc., engineers here, will henceforth be handled by a newly formed subsidiary, the Ford, Bacon & Davis Construction Corp. Executive offices are at 39 Broadway, New York, and field offices at Dallas, Tex.

Officers of the new company are: Edgar G. Hill, president; James F. Towers and William von Phul, Jr., vice presidents; Henry F. Storck, secretary and treasurer.

Mr. von Phul, Jr., will manage the Dallas office and direct oil and gas pipeline projects.

New Colombian Company Organized

WASHINGTON—To explore and exploit petroleum deposits in the state of Carare, a new French oil company has been incorporated in Colombia. Financial capacity of the shareholders is more than $80,000,000 and the four refineries participating in the group have a capacity of about 25,000 barrels daily. The company is named the European Petroleum Society, and is the result of preliminary efforts of a financial group organized in 1929 by the Compagnie Saint-Gobain and the Compagnie des Raffineries de Berre.

Competitive Price Policy Adopted By Standard of California

LOS ANGELES, Apr. 17

DEVELOPMENTS in California's newest and most drastic gasoline price war assumed a most interesting aspect the past week with the inauguration of a competitive sales policy by Standard Oil Co. of California in its San Francisco and Oakland marketing districts.

Retail prices in these areas the last few weeks have ranged from 10 to 12 cents, the latter prices being maintained by company-owned stations. Standard initiated the new policy in an effort to eradicate the price-cutting tendency of major and independent resellers, who have been operating on a one-cent margin of profit with a resale price of 10 cents.

In the two districts affected, the new policy resulted in the display at stations of the company's subsidiary, Standard Stations, Inc., of signs announcing "Competitive Prices." With the regular price signs removed, stations in these areas were permitted to meet prices posted by other stations.

Although only an experiment, this effort to stabilize the local gasoline market is being given favorable consideration. Shell Oil Co. has followed Standard's lead of announcing competitive prices in the San Francisco Bay area and executives of other major marketing companies have indicated they would follow in principle if not in the method of application.

A modification of the plan by companies not owning chain stations would be to post a flat price over the particular areas affected rather than to leave price setting to the discretion of individual operators. This would, in effect, be equivalent to another reduction in the tank wagon prices.

Price cutting is particularly active in the Los Angeles Basin, and San Joaquin Valley districts and it is expected the competitive sales policy will be decided upon for these areas if it proves feasible in the north. Independent stations in southern California are openly advertising major company brands of gasoline at 2 and 3 cents below the retail price of 10.50 cents posted at major company stations.

Marketers do not look for Pacific Coast gasoline markets to assume their normal trend before May 1 and possibly not before June 1, although a prolongation of low prices for another six weeks would undoubtably prove an impossible hurdle for many of the independent and some major companies even at present low crude prices.

With the enthusiastic endorsement of major executives, the Oil Producers Sales Agency has launched a statewide drive for members. If this organization could gain the support of 85 to 90 per cent of the state's independent crude oil production there is a good chance that conditions would soon be restored to normal.

The agency, headed by Ralph B. Lloyd, has appointed Neil H. Anderson as chairman of the membership committee. Mr. Anderson has appointed sub-committees for nearly every oil field in southern California and expects to contact independent producers in every district in California.

Pennsylvania Markets

Market Featureless

CLEVELAND, April 18.—The western Pennsylvania refinery market was featureless the past week. Demand for motor fuels slowed down still further. Burning oils remained quiet. Lubricating oils continued to be the most active products but even in this division of the refined oil price list demand slackened considerably.

Gasoline prices remained steady during the forepart of the week. Distress offerings became more numerous the last few days, however, and prices showed signs of easing. U. S. Motor was quoted generally at 5.125 to 5.50 cents. An increasing number of sales were reported at 5 cents April 17 and 18.

Kerosine and fuel oil were in much the same position as gasoline. The general market minimum for 45 w.w. kerosine remained at 4.375 cents, and for 36-40 fuel oil, 2.75 cents. There was considerable shading of these prices reported as the week ended.

Neutral oils lost 0.5 cent from the top side of the market but minimum quotations were generally unchanged. The market was free of distress offerings of neutrals but the supply was larger than for some time past.

Cylinder stocks and bright stocks were somewhat easier. Prices for the latter oils showed further slight recessions.

Wax was quiet and several sellers quoted both the 122-124 and 124-126 A.m.p. grades of white crude scale a few points lower.

Sales Managers to Talk Sales Problems

FORT WORTH, Tex., April 20.—A conference which will be devoted exclusively to a discussion of mutual sales problems by sales executives in various lines of industry will be held here May 16 by southwestern sales managers. It will be the first annual meeting of this group and is being sponsored by the Fort Worth Sales Managers Club, of which Carl Wollner, president of Panther Oil & Grease Mfg. Co., is president.

Ten subjects will be discussed. They include problems common to all industry, such as the selection and training of salesmen, how to enthuse them and to create loyalty; how to sell the entire line; remuneration plans and expense accounts; sales contests; and the Saturday problem. What sales managers today need most will be another problem, to be discussed by Lynn Squires, sales counsellor, formerly of Louisville, Ky.

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Eastern Domestic Markets

Declining Prices Unsettle Gasoline Markets

Staff Special
NEW YORK, April 18

EASTERN gasoline markets again became unsettled when wholesale prices at New York harbor in a few instances fell below the 6-cent level during the week ended April 18. Buying interest quickened appreciably. The trade along the seaboard was waiting expectantly for the adoption or rejection of the policy of marketing a third grade of gasoline by eastern companies.

The majority of tank car sales of U. S. Motor gasoline at New York harbor were made at 6 cents during the past week, and barge lots generally moved a 0.25 cent under the tank car price. Although the demand has been very good, according to most sellers, the supply seemed to be more than ample. A few scattered barge lots were sold at 5.50 cents and were moved into neighboring markets. A sale of five cars of U. S. Motor was reported at under 6 cents but most sellers refused to meet this competition.

The Philadelphia market eased off a 0.25 cent to 6 cents when sizeable sales were made at that figure. Several sources of supply offered gasoline freely at 6 cents although a few large sellers refused to quote under 6.25 cents. The latter group of sellers were contented to rely on the quality of their material rather than the price to attract business. For the past few weeks gasoline has been moving into Philadelphia by water and rail from New York and Baltimore. The Philadelphia trade complained of lost gallonage and it was indicated in some quarters that they were going out after the business from now on.

Prices for gasoline at Baltimore remained fairly steady at 6 cents although one refiner complained that his sales were not up to expectations. Baltimore traders who have been moving gasoline into neighboring markets have found that as the latter markets declined their net backs have reached extremely low levels. Jobber buying has been good, but according to reports the surplus of gasoline stocks has caused the unsettled condition in the under structure of this market.

Although some California gasoline was offered at New York, this material was not available in either the Philadelphia or Baltimore markets. Where sales of genuine California motor were made, the prices were, generally speaking, on the basis of regular U. S. Motor.

The New England market became unsettled in sympathy with the condition prevailing at New York harbor. Spot prices, however, remained unchanged at 6.75 cents f.o.b. Boston and Providence and 7 cents f.o.b. Portland. Reports from the Boston trade indicated that spot activity was very light, but contract buyers were taking out their maximum requirements. Several barge lots were moved into this market by New York sellers at approximately 6 cents, delivered.

The kerosine market was dull all along the coast. This material was freely offered at New York at 5.75 cents.

The posted prices for bunker C fuel oil remained unchanged at $1.05 per barrel in both New York and Boston markets.

Demand for Gulf Lubes Normal

HOUSTON, April 18.—Manufacturers of Gulf Coastal lubricants are marking time, with sales at unchanged levels as compared with those prevailing in recent weeks. Demand from jobbers is reported normal for the season.

Gulf Coast Markets

Cargo Trading Continues Quiet

Staff Special
NEW YORK, April 18

BULK prices at the Gulf remained unchanged in a quiet market. There were no inquiries for cargo shipments except for gasoline and kerosine in cases.

Two inquiries for cased goods were circulated late in the week. One called for approximately 12,000 cases of U. S. Motor and the other for 10,000 cases of water white kerosine for prompt shipment to the West Indies. This was the first sign of sizeable business which has entered this market for many weeks, and was greeted hopefully by the trade. At this writing the business had not been placed.

The fuels market was very quiet. Roumanian suppliers were still able to satisfy the European demand for gasoline and kerosine.

Cargo lots of bunker C were offered generally at $0.65 per barrel although it was reported that $0.60 could probably be done on one or two distress cargoes.

There were no sales of gasoline reported for domestic shipment. Several traders during the past week offered cargo lots of California U. S. Motor at 4.625 cents delivered in the eastern market. This price indicated that the west coast suppliers were inclined to compete with the Gulf market again. The California sellers were said to be determined to recover as much of their lost business as possible, but at this date no sales have been reported, nor any effect noted in bulk prices at the Gulf.

Venezuela Crude

The market for Venezuela crude marked time the past week. No sales were reported. Several traders were prepared to quote $0.70 per barrel f.o.b. deepwater in the Lake Maracaibo region on likely inquiries.

Panuco Crude

Inquiry for Panuco crude continued fairly active the past week. No sales were reported. Sellers were quoting $0.46 per barrel, f.o.b. Tampico.

Wax Markets

Scale Waxes More Active

NEW YORK, April 18.—Scale waxes were the center of interest the past week. A few small lots of yellow and white scale were sold at 2.10 cents per pound for foreign shipment. One domestic buyer was reported to have purchased 50 tons of scale wax at 2 cents. However, this sale failed to shake the suppliers of large quantities lower than 0.05 cent below last week's prices.

Yellow scale was quoted generally at 2.10 cents. The 122-124 A.m.p. and the 124-126 A.m.p. grades of white scale were quoted from 2.10 to 2.15 cents per pound in both the New York and New Orleans markets. The prices for the fully refined grades remained generally unchanged.

Belgian Company Seeks Agency

BRUSSELS, Belgium, April 20.—A general agency for an American oil company is being sought by a Belgian company selling gasoline, according to J. Natengel, of Belgian Gasoline, 295 rue Francois Gay, Bruxelles.

Shell Protests Cut in Rail Rates On East Texas Crude

WASHINGTON, April 20

FIGHTING has resulted from the first avowed attempt by a railroad system to make freight rates aimed to keep pipelines from obtaining a monopoly of the transportation of crude from the East Texas field. And it is not a contest with all the railroads on one side and the oil interests on the other either.

The Missouri Pacific system is the pioneer. It proposed to establish a rate of 20 cents a hundred pounds from the East Texas field, on the Texas & Pacific and International-Great Northern parts of its system to refineries in the St. Louis district and about three cents higher to the Missouri River refinery group. Shell Petroleum Corp., the Kansas City Southern and the Alton & Southern railroads have asked the Interstate Commerce Commission to suspend the tariff, dated to become effective April 24, after only ten days notice instead of the statutory notice of 30 days.

At the same time the Vacuum Oil Co., Lubrite Refining Co., and the White Star Refining Co., with refineries in the St. Louis district asked the freight rate body to permit the reduced rates to become effective.

Speaking through its traffic manager, E. W. Sieboldt, the Shell said that the railroads had not shown that crude pipelines were being constructed or under contemplation from the East Texas field to any one of the destinations mentioned in the tariffs. Nor, said he, had they submitted any evidence to show that the rates proposed were the rates necessary to meet pipeline competition even though pipelines were being considered.

Sieboldt made some figures to show that the proposed rates were lower than necessary to meet competition from Oklahoma wells. Saying that the Shell was advised that 38-39 gravity crude could be bought for 15 cents a barrel at the well or 20 cents in tank cars, although the lowest posted field price was 25 cents or 30 cents in tank cars.

Adding the price and the freight rate, Sieboldt said that east Texas crude could be laid down at Roxana or Wood River at a price of either 82.2 or 92.2 cents a barrel depending upon which of the prices quoted, 15 or 25 cents a barrel, was taken as authoritative.

Taking Oklahoma crude of the same grade, that is, 38-39 gravity the delivered price figured out to $1.09 a barrel when transported by pipeline, using what he said was the lowest posted price of the big companies, 63 to 65 cents a barrel and adding to it a gathering charge of 12 cents and a pipeage charge of 34 cents a barrel. These figures, he said, clearly indicated that the Missouri Pacific lines had proposed a rate from east Texas far below that necessary to meet pipeline competition from Oklahoma.

Calling attention to the fact that the rate on crude from Group Two is 22.5 cents; from Group Three, 24 cents; from Group Four, 24 and 26 cents from East Texas, Mr. Sieboldt said that the inevitable result of allowing the proposed 20 cent rate from East Texas to go into effect would be a general breaking down of the rate structure.

The Vacuum, speaking through J. D. Stirling, its general traffic manager, said that it would contract for the supply of crude for its Wood River and East St. Louis refineries on the basis of the rate of 20 cents proposed by the Missouri Pacific lines. These contracts, the company said, would be let due to the proposed rate permitting the purchase of the East Texas crude for rail movement on a basis comparable to the laid down cost of crude from other producing fields.

The Vacuum added that its present supply of crude was purchased from producers in other fields and moved principally by pipeline. Vacuum said that if the rate body suspended the 20 cent rate that action would force it to continue its purchases of crude from the present sources of supply.

"The 20-cent rate" said Vacuum "is comparable with possible pipeline cost, which facilities are contemplated and will be constructed if present rates remain in force" which is contrary to the understanding indicated by Sieboldt of the Shell.

H. T. Ashton, president of the Lubrite said that the 20 cent rate was necessary to permit handling of the crude by rail and that if the rate were suspended the company would be forced to obtain its supply from other territory to be transported by pipeline. The White Star said it sympathized with the efforts of the railroads to hold crude tonnage to their rails and that therefore it protested against the suspension for which the Shell and the two railroads asked.

The Kansas City Southern and the Alton & Southern asked for suspension because the Missouri Pacific lines made no provision for allowing them to get any of the prospective business by holding the routing of traffic to Missouri Pacific lines all the way. They object to such exclusiveness.

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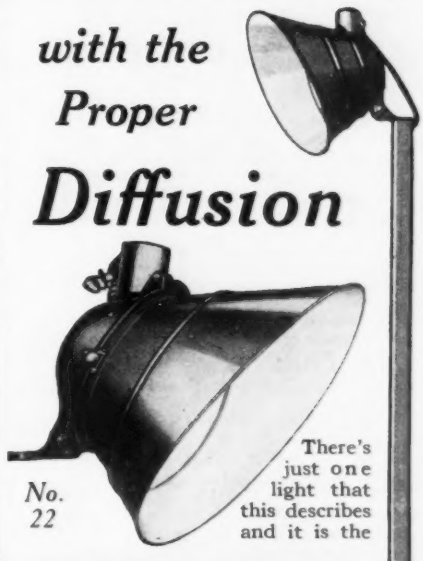

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Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of sales and quotations. Prices shown below do not include inspection tax levied in some states.)

	Prices April 20	Prices April 13	Prices April 6
U. S. MOTOR GASOLINE			
New York harbor	6.00 – 6.25	6.00 – 6.50	6.25 – 6.50
Portland district	7.00	7.00	7.00
Boston district	6.75	6.75	6.75
Providence district	6.75	6.75	6.75
Philadelphia district	6.00 – 6.25	6.25 – 6.50	6.50
Baltimore district	6.00 – 6.25	6.00 – 6.50	6.25 – 6.50
Norfolk district	6.50	6.50	6.50
Charleston district	6.50	6.50	6.50
Savannah district	6.50	6.50	6.50
Jacksonville district	6.50	6.50	6.50
CALIFORNIA U. S. MOTOR GASOLINE			
New York harbor	6.00 – 6.25	†6 50	†6.50
Philadelphia district	6.00 – 6.25	†6.50	†6.50
Baltimore district	6.00 – 6.25	†6.50	†6.50
‡DOMESTIC AVIATION GASOLINE			
New York harbor	10.00 –12.00	10.00 –12.00	10.00 –12.00
Philadelphia	10.00 –12.00	10.00 –12.00	10.00 –12.00
Baltimore	11.00 –12.00	11.00 –12.00	11.00 –12.00
Boston	11.50 –13.00	11.50 –13.00	11.50 –13.00

‡Prices are based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167°F. and not less than 122°F.; 50% recovery at 221°; 90% at 311°; 96% at 347° end point 374°F. Gasoline of fighting grade specifications in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

WATER WHITE KEROSINE			
New York harbor	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00
Philadelphia district	6.00	6.00	6.00
Baltimore district	6.00	6.00	6.00
GAS OIL: 28-34 Gravity			
New York harbor	4.50	4.50	4.50
Boston district	4.50	4.50	4.50
FURNACE OIL: 36-40 Gravity			
New York harbor	5.50	5.50	5.50
Boston district	5.50	5.50	5.50
GRADE C BUNKER OIL (Lighterage 5c per bbl. additional)			
New York harbor	$1.05	$1.05	$1.05
Boston district	$1.05	$1.05	$1.05
DIESEL OIL			
New York harbor	$1.75	$1.75	$1.75

†Nominal.

New York Export Market

(Lubricating oils are per gal. in bbls. F.a.s. New York)

	April 20	April 13	April 6
CYLINDER OILS (Pennsylvania Products)			
Bright stock, No. 8 color	24.50 –25.00	23.50 –25.00	23.50 –25.00
Bright stock, No. 6½ color diluted	23.50 –24.00	22.50 –24.00	22.50 –24.00
600 D filtered	22.50 –25.00	22.50 –25.00	22.50 –25.00
600 Warren E filtered	18.00 –21.00	18.00 –21.00	18.00 –21.00
600 stm. refd. unfiltered	14.50 –16.00	14.50 –16.00	14.50 –16.00
650 stm. refd. unfiltered	18.00 –20.00	18.00 –20.00	18.00 –20.00
600 flash steam refined	18.50 –20.00	18.50 –20.00	18.50 –20.00
630 flash, steam refined	24.00 –26.00	24.00 –26.00	24.00 –26.00
RED PARAFFIN OILS (Vis. 100°)			
300 vis. No. 6½ color	17.00 –20.00	17.00 –20.00	17.00 –20.00
250 vis. No. 6 color	16.50 –17.50	16.50 –17.50	16.50 –17.50
200 vis. No. 6 color	14.75 –17.00	14.75 –17.00	14.75 –17.00
PALE PARAFFIN OILS (Vis. 100°)			
230 vis. No. 3¼ color	21.50	21.50	21.50
180 vis. No. 3¼ color	18.00 –20.00	18.00 –20.00	18.00 –20.00
100 vis. No. 2¼ color	12.50 –15.00	12.50 –15.00	12.50 –15.00

Wax Market

(Melting points are A.M.P. method. Prices in cents per pound, f.a.s. carload lots.)

NEW YORK	April 20	April 13	April 6
124-126 Yellow crude scale	2.10	2.15	2.20
122-124 White crude scale	2.10 – 2.15	2.20	2.20 – 2.25
124-126 White crude scale	2.10 – 2.15	2.20	2.20 – 2.25
123-125 Fully refined	3.25	3.25	3.25
125-127 Fully refined	3.25	3.25	3.25 – 3.375
128-130 Fully refined	3.375– 3.50	3.375– 3.50	3.375– 3.50
130-132 Fully refined	3.50 – 3.625	3.50 – 3.625	3.50 – 3.625
133-135 Fully refined	4.375– 4.50	4.375– 4.50	4.375– 4.50
135-137 Fully refined	4.625	4.625	4.625– 4.75
NEW ORLEANS			
124-126 Yellow crude scale	2.10	2.15	2.15
122-124 White crude scale	2.10 – 2.15	2.20	2.20 – 2.25
124-126 White crude scale	2.10 – 2.15	2.20	2.20 – 2.25
123-125 Fully refined	3.25	3.25	3.25
125-127 Fully refined	3.25	3.25	3.25 – 3.375
128-130 Fully refined	3.375– 3.50	3.375– 3.50	3.375– 3.50
130-132 Fully refined	3.50 – 3.625	3.50 – 3.625	3.50 – 3.625
133-135 Fully refined	4.375	4.375	4.375

Gulf Coast Bulk Market

(Prices are f. o. b. Gulf oil terminals representing sellers' opinions covering bulk shipments of 20,000 barrels or more, for export and / or coastwise shipment unless otherwise noted.)

GASOLINE	Prices April 20	Prices April 13	Prices April 6
U. S. Motor	4.50	4.50	4.50 – 5.00
60-62, 400 e.p.	5.00	5.00	4.75 – 5.25
61-63, 390 e.p.	5.25	5.25	5.25 – 5.50
64-66, 375 e.p.	5.50	5.50	5.50 – 5.75
U. S. Motor, (cases cargoes)	$1.60	$1.60	$1.60
64-66, cases (cargoes)	$1.70 –$1.72	$1.70 –$1.72	$1.70 –$1.72
KEROSINE			
44 water white	5.00	5.00	5.25
41-43 prime white	4.00	4.00	4.25
Water white, cases (cargoes)	$1.40	$1.40	$1.40
Prime white, cases (cargoes)	$1.30	$1.30	$1.30
GAS & BUNKER OILS			
*26-30 translucent gas oil	3.00	3.00	3.00
*30 plus translucent gas oil	3.00	3.00	3.00
Grade C bunker oil, for ships' bunkers, per bbl.	$0.90	$0.90	$0.90
Grade C bunker oil, per bbl. in cargoes	$0.60 –$0.65	$0.62 –$0.65	$0.62 –$0.65

*Less than ½ of 1% sulphur.
†Represents sales only.

MEXICAN CRUDE AND BUNKER OILS (f. o. b. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid, per bbl.	$0.46	$0.46	$0.46
Grade C bunker oil for bunkering, taxes paid, per bbl.	$0.90	$0.90	$0.90
VENEZUELA CRUDE			
F. o. b. deepwater, Lake Maracaibo region	$0.70 –$0.76	$0.72 –$0.76	$0.72 –$0.76

SOUTH TEXAS LUBRICATING OILS (Viscosity at 100°F cold test 0 Tanker, f. o. b. Gulf oil terminals.)

100 vis. No. 2 unfiltered pale	4.75 – 5.75	4.75 – 5.75	4.75 – 5.75
200 vis. No. 3 unfiltered pale	6.75 – 8.25	6.75 – 8.25	6.75 – 8.25
300 vis. No. 3 unfiltered pale	7.75 – 9.50	7.75 – 9.50	7.75 – 9.50
500 vis. No. 3½ unfiltered pale	8.75 –10.50	8.75 –10.50	8.75 –10.50
750 vis. No. 4 unfiltered pale	10.25 –12.75	10.25 –12.75	10.25 –12.75
1200 vis. No. 4 unfiltered pale	14.00 –16.00	14.00 –16.00	14.00 –16.00
200 vis. No. 5-6 red oil	6.00 – 6.75	6.00 – 6.75	6.00 – 6.75
300 vis. No. 5-6 red oil	7.00 – 7.75	7.00 – 7.75	7.00 – 7.75
500 vis. No. 5-6 red oil	8.00 – 9.00	8.00 – 9.00	8.00 – 9.00
750 vis. No. 5-6 red oil	9.25 –11.50	9.25 –11.50	9.25 –11.50
1200 vis. No. 5-6 red oil	13.00 –15.00	13.00 –15.00	13.00 –15.00

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	April 20	April 13	April 6
Gasoline, U. S. Motor, 53-55 Gravity	3.50 – 4.50	3.75 – 4.50	4.00 – 4.50
Gasoline, U. S. Motor-blends and special cuts	4.25 – 4.75	4.25 – 4.75	4.50 – 5.00
Gasoline, 400 e.p. blend	4.75 – 5.25	4.75 – 5.25	5.25 – 5.50
Gas Oil, 30-34 per bbl.	$0.80 –$0.90	$0.80 –$0.90	$0.85 –$0.90
Diesel Oil, 27 plus, per bbl.	$0.80 –$0.90	$0.80 –$0.90	$0.85 –$0.90
Bunker oil, 14-18 per bbl.	$0.62 –$0.72	$0.62 –$0.72	$0.62 –$0.72
Fuel oil, 14-18 per bbl.	$0.55 –$0.70	$0.55 –$0.70	$0.60 –$0.85
Kerosine, 38-40 w.w., 125-150 flash, per gal.	4.00 – 4.50	4.00 – 4.50	4.75 – 5.50
Cased Goods			
Gasoline, U. S. Motor	$1.45 –$1.55	$1.45 –$1.55	$1.75 –$1.85
Gasoline, 400 e.p. blend	$1.55 –$1.65	$1.55 –$1.65	$1.85 –$2.00
Kerosine, 38-40 w.w., 125-150 flash	$1.40 –$1.45	$1.40 –$1.45	$1.45 –$1.50

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to American ports, cents per barrel.)

	April 20	
	Crude &/or Fuel	Refined Oil &/or Spirits
Calif. to U. K. or Continental ports*	21	18
Gulf to U. K. or Continental ports*	10-11	†10
North Atlantic to U. K. or Continental ports*	9/6	†8/6
Calif. to North Atlantic ports (not E. of N. Y.)	$0.45-$0.50	$0.45-$0.50
Gulf to North Atlantic ports (not E. of N. Y.)**	14-15	15

*Continental ports in the range between Bordeaux and Hamburg, both inclusive. **Venezuela loading same rate, for Tampico 2c to 3c per bbl. additional. †Two ports discharged.

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(Name of this jobber on request)

That's the report we received from a jobber in a town of about 840 people in central Illinois after he had given the Graigrene Resale Plan a test. He certainly found it paid. Because previously his grease business had been worth nothing to him. And this is just one of dozens of jobbers who have had the same experience!

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Company..... Name.....

Address..... City.....

Tank Wagon, Service Station Markets for Gasoline and Kerosine

(OIL PRICE HANDBOOK has t.w. and s.s. markets for a whole year, arranged for quick reference)

These Prices in Effect April 20, 1931, as Posted by Principal Marketing Companies

Latest Changes in Tank Wagon Prices

Gasoline

Atlantic Refining—S. s. only up 1c, Fall River, to 16.1c, **March 31.**

T. w. and s. s. cut 0.3c thru New Jersey and Maryland, **April 9.**

T. w. and s. s. cut 0.3c, Richmond, to 16.4c and 17.4c respectively, **April 10.**

S. O. Kentucky—S. s. cut 2c, Tampa, to 17c, **April 7.**

S. s. cut 2c, Montgomery, to 17c, **April 14.**

S. O. Indiana—T. w. and s. s. up 2c, St. Louis, both to 12.9c, including 2.5c state-city taxes, **April 15.**

T. w. cut 2c, Des Moines, to 12.5c, **April 8.**

T. w. cut 2c, Sioux City, to 12.1c, **April 3.**

T. w. cut 1c, Fargo, to 15c, **April 3.**

Correction: Prices at Bartlesville have been in error since March 11. On March 10, t. w. and s. s. were cut 1.5c, to 12c and 15c respectively, including 4c tax. On March 26 t. w. and s. s. advanced 1c, to cover state tax increase to 5c, making gasoline prices 13c and 16c, which are correct prices as of April 20.

S. O. Louisiana—T. w. and s. s. cut 0.5c, thru Arkansas, Louisiana and Tennessee, except Memphis, unchanged, **April 11.**

Magnolia Petroleum—T. w. and s. s. up 1c, Fort Smith, Ark. to cover 1c increase in Oklahoma state tax which applies within city of Fort Smith, March 26. Prices that day became 16c and 17c, including 5c tax. T. w. and s. s. cut ½c, to 15.5c and 16.5c, including 5c tax, **April 11.**

T. w. and s. s. cut ½c, Little Rock, to 16.5c and 17.5c, including 6c tax, **April 11.**

Continental Oil—T. w. and s. s. cut 1c, Denver, to 14c and 17c respectively, including 4c tax, **April 13.**

T. w. and s. s. cut 2c, Butte, to 17c and 20c, respectively, including 5c tax, **April 17.**

T. w. and s. s. up 1c, Denver, to 15c and 18c, including 4c tax, **April 18.**

S. O. California—Retail price cut 1c, Phoenix, to 20c, including 5c tax, by Standard Stations, Inc., **April 16.**

Aviation Gasoline

Continental Oil—T. w. cut 1c, Denver, to 17c, including 4c road tax, **April 13.**

T. w. up 1c, Denver, to 18c, including 4c tax, **April 18.**

S.O.NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Atlantic City, N. J.	11.2	3	14.2	16.2	11.5
Newark, N. J.	10.2	3	13.2	15.2	10.5
Annapolis, Md.	11.7	4	15.7	16.7	11
Baltimore, Md.	10.9	4	14.9	15.9	9.5
Cumberland, Md.	12.7	4	16.7	17.7	12
Washington, D. C.	11.4	2	13.4	14.4	10.7
Danville, Va.	12.5	5	17.5	18.5	11.8
Norfolk, Va.	11	5	16	17	10
Petersburg, Va.	12	5	17	18	11.3
Richmond, Va.	11.4	5	16.4	17.4	10.7
Roanoke, Va.	12.7	5	17.7	17.0	12
Charleston, W. Va.	12.2	4	16.2	17.2	11.5
Keyser, W. Va.	12.8	4	16.8	17.8	12.1
Parkersburg, W. Va.	10.9	4	14.9	15.9	10.2
Wheeling, W. Va.	12.1	4	16.1	17.1	11.4
Charlotte, N. C.	11	6	17	18	11
Hickory, N. C.	13.3	6	19.3	20.3	12.6
Mt. Airy, N. C.	13.2	6	19.2	20.2	12.5
Raleigh, N. C.	12.9	6	18.9	19.9	12.2
Salisbury, N. C.	13.2	6	19.2	18	12.5
Charleston, S. C.	11	6	17	18	10.3
Columbia, S. C.	12.9	6	18.9	19.9	12.2

Note: 2c per gallon discount off retail t.w. price of gasoline to dealers thru S. O. New Jersey territory, except Maryland and Washington, D. C. where discount is 3c.

S. O. NEW YORK

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Greater New York City: Boroughs of Manhattan, Bronx, Queens & Kings	11.3	2	13.3	15.3	10
Borough of Richmond	11.7	2	13.7	15.7	12
Albany, N. Y.	12.6	2	14.6	16.6	10.5
Buffalo, N. Y.	11.8	2	13.8	15.8	10
Rochester, N. Y.	12	2	14	16	10
Syracuse, N. Y.	12.8	2	14.8	16.8	10.5
Boston, Mass.	11.5	2	13.5	15.5	11
Augusta, Me.	12.8	4	16.8	18.8	12.8
Manchester, N. H.	12.4	4	16.4	18.1	11
Burlington, Vt.	13.3	4	17.3	19.3	11
New Haven, Conn.	12.6	2	14.6	16.6	12.6
Providence, R. I.	10.3	2	12.3	15.7	11

Discounts on gasoline: 2c per gal. off posted t. w. price to dealers, thru territory, except 3c to dealers inNew York City, effective Feb. 20, 1931.

ATLANTIC REFINING

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Pittsburgh, Pa.	12	*	12	17	12
Philadelphia, Pa.	12	*	12	17	12
Allentown, Pa.	12	*	12	17	12
Erie, Pa.	12	*	12	17	12
Scranton, Pa.	12	*	12	17	12
Altoona, Pa.	12	*	12	17	12
Dover, Del.	12	3	15	17	12
Wilmington, Del.	12	3	15	17	12
Boston, Mass.	11.5	2	13.5	15.5	11
Springfield, Mass.	12.5	2	14.5	16.5	11
Worcester, Mass.	12.3	2	14.3	16.3	11
Fall River, Mass.	12.1	2	14.1	16.1	11
Providence, R. I.	11.7	2	13.7	15.7	11
Hartford, Conn.	12.5	2	14.5	16.5	10
New Haven, Conn.	12.6	2	14.6	16.6	10
Atlantic City, N. J.	11.2	2	13.2	16.2	11.5
Camden, N. J.	10.3	2	12.3	15.3	10.6
Trenton, N. J.	10.7	2	12.7	15.7	11
Annapolis, Md.	11.7	4	15.7	16.7	11
Baltimore, Md.	10.9	4	14.9	15.9	9.5
Hagerstown, Md.	12.4	4	16.4	17.4	11.7
Richmond, Va.	11.4	5	16.4	17.4	10.7
Wilmington, N. C.	11.4	6	17.4	18.4	10.4
Brunswick, Ga.	12	6	18	20	**14
Jacksonville, Fla.	11	6	17	19	12

Note: 2c per gal. discount off t.w. price of gasoline on sales to dealers; discount to commercial accounts under contract for one year in accordance with Code of Ethics.

*3-cent state tax is collected by retail dealer and paid by him directly to state.

**Georgia kerosine prices include 1c state tax.

S. O. KENTUCKY

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Lexington, Ky.	12	5	17	18	12
Louisville, Ky.	11	5	16	17	11
Paducah, Ky.	12	5	17	18	11
Covington, Ky.	11	5	16	17	11
Jackson, Miss.	8	5	13	13	11.5
Vicksburg, Miss.	11	5	16	18	11.5
Birmingham, Ala.‡‡	13	4	17	19	13
Mobile, Ala.‡	13	4	17	19	13
Montgomery, Ala.*	13	4	17	17	13.5
Macon, Ga.	12	6	18	20	†13
Atlanta, Ga.	10	6	16	18	*†12.5
Augusta, Ga.	12	6	18	20	†14
Savannah, Ga.	12	6	18	18	†12
Jacksonville, Fla.	11	6	17	19	12
Miami, Fla.	12	6	18	20	13
Tampa, Fla.	11	6	17	17	12
Pensacola, Fla.**	10	6	16	18	13

Note: Net price of gasoline to dealers is 2c under posted t.w. price thru S. O. Kentucky territory.

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosine at Montgomery included.

†Georgia kerosine prices include 1c state tax.

**Both tank wagon prices include 1c city tax at Pensacola which went into effect Oct. 15, 1926.

‡Mobile gasoline prices include 1c city tax.

‡‡Birmingham gasoline prices include 1c city tax.

*†3c discount off t.w. price of oil at Atlanta, meeting competition.

S. O. OHIO

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Ohio statewide	12	4	16	17	13
Defiance, Hancock, Marion and Wyandot counties	12	4	16	16	13

Note: Discount on gasoline to dealers and commercial consumers generally thru Ohio is 2c per gal. off above t.w. prices.

Discount on kerosine to dealers and commercial consumers is 3c per gal. off t.w. price thru Ohio.

S. O. INDIANA

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Chicago, Ill.	11	3	14	14	9
Decatur, Ill.	11.4	3	14.4	14.4	9
E. St. Louis, Ill.	10.7	3	13.7	13.7	8.2
Joliet, Ill.	11.4	3	14.4	14.4	9

Above prices include these inspection fees on both gasoline and kerosine, per gallon: Alabama, 1/40c on gasoline, 1/2c kerosine; Arkansas, 1/20c on both; Florida, 1/8c on both; Illinois, 3/100c on both; Indiana, 2/25c to 1/2c on both; Kansas, 3/50c on both; Louisiana, 1/32c on gasoline; Minnesota, 3/50c on both; Missouri, 1/50c to 1/2c on both; Nebraska 3/100c on both; North Carolina, 1/4c on both; North Dakota, 1/20c on both; Oklahoma, 4/25c on both; South Carolina 1/8c on both; South Dakota, 1/10c on both; Tennessee, 2/5c on gasoline and 1/2c to 4/5c on kerosine; Wisconsin, 1/25c on both.

Kerosine inspection fees only, per gallon; Iowa 7/100c; Michigan, 1/5c to 4/5c per gal.

Tank Wagon, Service Station Markets for Gasoline and Kerosine

These Prices in Effect April 20, 1931, as Posted by Principal Marketing Companies

S. O. INDIANA (*Continued*)

	Gasoline				Oil
	T.W.	Tax	Total T.W.	S.S.	T.W.
Peoria, Ill.	11.4	3	14.4	14.4	9
Quincy, Ill.	11.2	3	14.2	14.2	8.8
Springfield, Ill.	11.4	3	14.4	14.4	9
Indianapolis, Ind.	11.3	4	15.3	15.3	10.1
Evansville, Ind.	11.1	4	15.1	15.1	9.9
South Bend, Ind.	11.4	4	15.4	15.4	10.2
Detroit, Mich.	11.8	3	14.8	14.8	10.7
Grand Rapids, Mich.	11.7	3	14.7	14.7	10.6
Saginaw, Mich.	11.9	3	14.9	14.9	10.8
Green Bay, Wisc.	11.6	4	15.6	15.6	9.4
Madison, Wisc.	11.3	4	15.3	15.3	9.1
Milwaukee, Wisc.	11.1	4	15.1	15.1	8.9
La Crosse, Wisc.	12.2	4	16.2	16.2	10
Minneapolis, Minn.	12.2	3	15.2	15.2	9.9
Duluth, Minn.	12.5	3	15.5	15.5	9.9
Mankato, Minn.	10.1	3	13.1	15	9.7
Des Moines, Ia.	9.5	3	12.5	13.5	9.3
Davenport, Ia.	11.5	3	14.5	14.5	9.3
Sioux City, Ia.	9.1	3	12.1	13.1	8.9
Mason City, Ia.	11.5	3	14.5	14.5	9.3
St. Louis, Mo.	*10.9	2	12.9	12.9	8.3
Kansas City, Mo.	†11.9	2	13.9	13.9	7.6
St. Joseph, Mo.	†11.5	2	13.5	13.5	7.5
Fargo, N. D.	12	3	15	16	11.9
Grand Forks, N. D.	14.2	3	17.2	17.2	12.2
Minot, N. D.	13.9	3	16.9	16.9	11.9
Pierre, S. D.	12	4	16	16	10.4
Huron, S. D.	12.3	4	16.3	16.3	10.7
Wichita, Kans.	9.8	3	12.8	12.8	7.8
Bartlesville, Okla.	8	5	13	16	7.5

*Includes city tax of ½c.
†Includes city tax of 1c.

Discounts: Old Q. D. A. on gasoline now in effect (new one to become effective around May 11):

3c per gal. off service station price on 500 gals. or over per month; 4.5c off for 75,000 gals. or over per month, thru territory, except Chicago.

Chicago: 2c per gal. off s. s. price for 500 to 999 gals. per month; 4c off for 1000 gals. or over per month.

New Q. D. A., to become effective around May 11, 1931, on gasoline in any quantity, thru territory, except Chicago, discount off s. s. price:

To re-sellers only: on Ethyl gasoline, 3c per gal. off s.s. price; Red Crown, 2.5c per gal.; and on Stanolind Blue gasoline, 1c per gal. In Chicago, discounts are 1c higher in each instance than those shown above.

To consumers: same discounts as above for territory and Chicago, except discounts are based off tank wagon price, and affect purchases of 1,000 gallons or more per month.

S. O. NEBRASKA

Omaha, Neb.	11.25	4	15.25	17.25	9.25
McCook.	12.75	4	16.75	18.75	10.75
Norfolk.	11.75	4	15.75	17.25	9.75
North Platte.	12.75	4	16.75	18.75	10.5
Scottsbluff.	12	4	16	16	10.25

Note: Discounts: 1c per gal. off tank wagon price of gasoline for 1,000 gallon dumps per month to consumers taking tank wagon delivery only discount applying only at normal points.

S. O. LOUISIANA

	Gasoline				Oil
	Posted Retail T.W.	Tax	Total Posted Retail T.W.	Posted Retail S.S.	T.W.
Little Rock, Ark.	10.5	6	16.5	17.5	11
Alexandria, La.	10.5	*6	16.5	17.5	†12
Baton Rouge, La.	10.5	5	15.5	16.5	†12
New Orleans, La.	9.5	*6	15.5	16.5	†12
Lake Charles, La.	10.5	*6	16.5	17.5	†12
Shreveport, La.	10.5	5	15.5	16.5	†12
Lafayette, La.	10.5	*6	16.5	17.5	†12
Bristol, Tenn.	13.5	5	18.5	19.5	14
Chattanooga, Tenn.	12.5	5	17.5	18.5	13
Knoxville, Tenn.	13	5	18	19	13.5
Nashville, Tenn.	12	5	17	18	12.5
Memphis, Tenn.	10	5	15	16	10

Note: Discounts in S. O. La. territory: To dealers and commercial consumers from the tankwagon, 2c per gal. off posted retail t.w. price.

Lake Charles, Alexandria, New Orleans and Lafayette gasoline tax includes 5c state tax and 1c parish tax. New Orleans kerosine price includes 1c parish tax in addition to 1c state tax.

†Kerosine price in Louisiana includes 1c state tax.

MAGNOLIA PETROLEUM

Muskogee, Okla.	8	5	13	16	8
Oklahoma City.	6	5	11	13	8
Tulsa, Okla.	8	5	13	16	8
Fort Smith, Ark.	10.5	5	15.5	16.5	11
Little Rock, Ark.	10.5	6	16.5	17.5	11
Texarkana, Ark.*	12	4	16	16	11
Dallas, Tex.	11	4	15	18	10
Fort Worth, Tex.	9	4	13	15	10
Houston, Tex.	10	4	14	18	11
San Antonio, Tex.	10	4	14	18	10
El Paso, Tex.	10	4	14	18	12

*Within city of Texarkana, the state tax on gasoline is 4c per gal. conforming with the Texas state tax. In this district outside of the city the 5c Arkansas tax applies.

CONTINENTAL OIL

	Gasoline				Oil
	T.W.	Tax	Total T.W.	S.S.	T.W.
Denver, Colo.	11	4	15	18	12.5
Pueblo, Colo.	9	4	13	16	12
Grand Junc., Colo.	12	4	16	19	16
Casper, Wyo.	11	4	15	18	10
Cheyenne, Wyo.	12	4	16	19	11.5
Butte, Mont.	12	5	17	20	16
Helena, Mont.	15	5	20	23	16
Salt Lake City, Utah.	†14.5	3.5	18	17	16
Boise, Ida.	*16.5	5	21.5	..	18
Twin Falls, Ida.	**16.5	5	21.5	..	18
Albuquerque, N. M.	11	5	16	20	14

*Less 3c on gasoline at time of delivery.
†Less 4c on gasoline at time of delivery at Salt Lake.
**Less 4.5c on gasoline at time of delivery at Twin Falls.

S. O. CALIFORNIA

	State Tax	Gasoline Tank Truck	*Retail	Oil T.W.
San Francisco, Cal.	3	9	12	15.5
Los Angeles, Cal.	3	7.5	10.5	15.5
Fresno, Cal.	3	9	12	17
Phoeniz, Ariz.	5	17.5	20	20
Reno, Nev.	4	16	....	19
Portland, Ore.	4	11.5	14.5	16.5
Seattle, Wash.	5	11	14	16.5
Spokane, Wash.	5	17	20	20.5
Tacoma, Wash.	5	11	14	16.5

Note: No discounts off above gasoline prices; tank truck prices are those to resale trade; wholesale prices are generally 6c above tank truck prices, except at Phoenix 1c, Reno and Spokane 4c.

*Retail prices are those of Standard Stations, Inc., marketing subsidiary of the Standard Oil Co. of California.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

	Gasoline				Oil
	T.W.	Tax	Total T.W	S.S	T.W.
ONTARIO					
Toronto.	16	5	21	24.5	17
Ottawa.	17	5	22	25.5	18
North Bay.	20	5	25	30.5	21
Fort William.	19.5	5	24.5	28	19.5
Border Cities, including Windsor.	16	5	21	24.5	15
MANITOBA					
Winnipeg.	18	5	23	27	18.5
SASKATCHEWAN					
Regina.	22	5	27	31	22
ALBERTA					
Edmonton.	23	5	28	31.5	23
Calgary.	19.5	5	24.5	28	19.5
BRITISH COLUMBIA					
Vancouver.	21	5	26	28	22
QUEBEC					
Montreal.	17	5	22	25.5	18
Quebec City.	19	5	24	27.5	20
Three Rivers.	19	5	24	27.5	20
NEW BRUNSWICK					
St. John.	18.5	5	23.5	27.5	20.5
Moncton.	18.5	5	23.5	27.5	20.5
NOVA SCOTIA					
Halifax.	18.5	5	23.5	27.5	20.5
PRINCE EDWARD ISLAND					
Charlottetown.	18.5	5	23.5	27.5	20.5

Note: In districts surrounding these points 1c additional is added to city price.

NAPHTHA PRICES

	Oleum Spirits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago.	10.7	12.7	14.2
Detroit.	13.4	14.9	15.7
Kansas City.	†11.9	†13.4	†14.2
Milwaukee.	12.4	*15.9	*16.7
Minneapolis.	**16.7	**18.2	**19
St. Louis.	11.6	13.1	13.9
New York.		14	20
Boston.		17	20

*Includes 2c state tax. †Includes 1c city tax.
**Includes 3c state tax.

Petroleum Spirits (Solvent)

Tank Cars (F.o.b. refinery or seaboard terminal)	
New York harbor.	10.00
Philadelphia district.	10.09
Providence.	10.50
Tank Wagon or Steel Barrels	
New York City.	14
Syracuse.	17
Rochester.	18
Buffalo.	16
Providence.	17
Boston.	17
Bridgeport.	15
Newark.	16
Philadelphia.	14
Lancaster.	17
Altoona.	17
Baltimore.	17

Note: 2c off above t.w. prices to large buyers in some instances.

Aviation Gasoline Prices

Following are tank wagon prices of aviation gasoline in principal marketing territories showing state and municipal taxes:

S. O. NEW JERSEY

Prices in Effect April 20, 1931

	T.W.	Tax	Total T.W.
Newark, N. J.	16.9	*	16.9
Baltimore, Md.	16.2	4	20.2
Washington, D. C.	17	2	19

***New Jersey road tax of 3c does not apply on aviation gasoline, exemption being claimed at time of purchase.**

All above prices are on Stanavo Aviation Gasoline.

COLONIAL BEACON OIL CO.

New York City.	17.5	2	19.5
Boston.	17	2	19

S. O. PENNSYLVANIA

Philadelphia, Pa.	16	3	19
Pittsburgh, Pa.	16	3	19
Altoona, Pa.	16	3	19

S. O. OHIO

Thru Ohio.	15	4	19

Discounts given by S. O. Ohio: For airport delivery only; 2,000 gals. or over per month, 1c per gal.; 6,000 gals. or over per month, 2c; 12,000 gals. and over per month, 3c; 24,000 gals. and over per month, 4c.

S. O. INDIANA

Chicago.	14	3	17
Indianapolis, Ind.	14.3	4	18.3
Detroit, Mich.	14.8	3	17.8
Milwaukee, Wis.	14.1	2	16.1
Minneapolis, Minn.	15.2	3	18.2
St. Louis, Mo.	13.4	2.5	15.9
Kansas City, Mo.	13.9	3	16.9
Fargo, N. D.	16.9	3	19.9
Huron, S. D.	15.3	4	19.3
Wichita, Kan.	12.8	3	15.8

In. S. O. Indiana territory, buyer pays state and city taxes on aviation gasoline, and if he can get a refund from the state, he does so. Kansas City tax of 3c includes 1c city tax; St. Louis tax of 2.5c includes ½c city tax.

S. O. LOUISIANA

New Orleans, La.	18	6	24
Nashville, Tenn.	20	5	25
Memphis, Tenn.	19	5	24

2c per gal. discount off above posted retail t.w. prices to dealers and commercial consumers.

S. O. NEBRASKA

Omaha.	16.25	4	20.25

4c per gal. refund to reseller.

CONTINENTAL OIL CO.

Denver, Colo.	14	4	18
Cheyenne, Wyo.	15	4	19
Helena, Mont.	18	5	23
Salt Lake City, Utah	†17.5	3.5	21
Albuquerque, N. M.	15	5	20
Boise, Ida.	*19.5	5	24.5

†Less 4c on aviation gasoline at time of delivery.
*Less 3c on aviation gasoline at time of delivery.

S. O. CALIFORNIA

Phoenix, Ariz.	17.5	4	21.5
Los Angeles, Cal.	16.5	3	19.5
San Francisco, Cal.	17	3	20
Reno, Nev.	21	4	25
Portland, Ore.	17.5	4	21.5
Seattle, Wash.	17.5	3	20.5
Spokane, Wash.	21.5	3	24.5

Note: 4c per gallon added to t.w. price, in S. O. California territory, to customers taking delivery direct into the fuel tank of planes.

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Crude Oil Prices (in Effect April 20, 1931)

Crude prices for the whole year in OIL PRICE HANDBOOK published annually

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Bradford—Alleghany district (posted by Tide Water Pipe Co., Ltd.) (Effective Nov.12,1930) $2.15
Penna. Grade Oil in National Transit Lines (Effective Nov. 12, 1930) *1.85
Penna. Grade Oil in Southwest Penna. Pipe Lines (Effective Nov. 12, 1930) 1.80
Penna. Grade Oil in Eureka Pipe Lines (West Virginia) (Effective Nov. 12, 1930) 1.70
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.) (Effective Nov. 12, 1930) 1.45
Corning Grade in Buckeye Pipe Lines (Ohio) (Effective March 11, 1931) 0.80
Somerset oil in main system of Cumberland Pipe Line (posted by Ashland Refining Co.) (Effective March 6, 1931) $0.75
Ragland Grade in Cumberland Pipe Lines (Kentucky) (Effective Jan. 9, 1929) $0.60
*Oil run prior to July 1, 1929 is 5c less per bbl.

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines (Effective April 1, 1931) $0.60

MICHIGAN

(Posted by Dixie Oil Co.)

Traverse and Dundee (Muskegon), effective March 5, 1931, same gravity and price schedule as Stanolind posts in Oklahoma, Kansas and North Texas, which see below.

(Posted by Pure Oil Co.)

Midland, Midland County (March 13, 1931) $0.75

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective March 6, 1931

Wooster	$0.99	Princeton	$0.80
Lima	0.90	Illinois	0.80
Waterloo	1.20	West Kentucky	0.75
Indiana	0.50		

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Effective Oct. 28, 1930

Petrolia $1.50
Oil Springs 1.57

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of *Stanolind Crude Oil Purchasing Co. (In Oklahoma, Kansas, North and North Central Texas)

Effective March 5, 1931

Below 29	$0.43	35-35.9	$0.57
29-29.9	0.45	36-36.9	0.59
30-30.9	0.47	37-37.9	0.61
31-31.9	0.49	38-38.9	0.63
32-32.9	0.51	39-39.9	0.65
33-33.9	0.53	40 and above	0.67
34-34.9	0.55		

*Prairie Oil & Gas withdrew postings in Oklahoma, Kansas and Texas, Jan. 1, 1931.

On March 5, 1931 these crude purchasers met above prices: Continental Oil Co., Eason Oil Co., Mid-Continent Petroleum Corp., Standard Oil Co. of Kansas, Tidal Refining Co., White Eagle Oil & Refining Co.

On March 10, 1931, these met Stanolind: Humble and The Texas Co.

Humble Oil & Refining Co.

Effective March 10, 1931

In North Texas, Ranger, Mexia, Powell, Boggy Creek, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona fields, all in Texas, same prices as Stanolind, which see.

Magnolia Petroleum Co.

(In Oklahoma, Kansas, North, *East and East Central Texas)

*Effective March 5, 1931

Magnolia posts same prices in all three states as Stanolind, except these lower grades:

Below 26	$0.40	27-27.9	$0.42
26-26.9	0.41	28-28.9	0.43

*Effective March 26, 1931, in East Texas.

Carter Oil Co.

(Oklahoma and Kansas)

March 10, 1931, same prices as Stanolind, which see.

PANHANDLE TEXAS

Humble Oil & Refining Co.

Effective March 10, 1931

Hutchinson and Carson Counties:

Below 35	$0.38	38-38.9	0.46
35-35.9	0.40	39-39.9	0.48
36-36.9	0.42	40 and above	0.50
37-37.9	0.44		

Gray County:

Below 35	$0.43	38-38.9	$0.51
35-35.9	0.45	39-39.9	0.53
36-36.9	0.47	40 and above	0.55
37-37.9	0.49		

Above prices met by Magnolia and The Texas Co. on March 10 in Hutchinson, Carson and Gray counties.

Wheeler County: Posted by Magnolia Pet. Co. Effective Apr. 10, 1930. Humble withdrew Wheeler county postings Apr. 10, 1930.

Below 30	$0.755	37-37.9	$1.11
30-30.9	0.805	38-38.9	1.145
31-31.9	0.855	39-39.9	1.18
32-32.9	0.905	40-40.9	1.215
33-33.9	0.955	41-41.9	1.25
34-34.9	1.005	42-42.9	1.285
35-35.9	1.04	43-43.9	1.32
36-36.9	1.075	44 and above	1.355

WEST TEXAS and NEW MEXICO

Humble Oil & Refining Co.

Effective March 10, 1931

Pecos and Winkler, (West Texas) and Lea County, N. M., all grades $0.40
Crane, Upton, Crockett, Ector, Howard and Glasscock Counties, all grades $0.35

March 10, 1931, The Texas Co. same prices in Crane, Upton, Winkler and Lea counties as Humble.

Oct. 28, Magnolia same prices in Winkler, Crane, Upton, Howard, Glasscock and Mitchell counties.

SOUTH and SOUTHWEST TEXAS

(Posted by Humble Oil & Refining Co.)

All Effective March 10, 1931

Mirando (Jan. 15, 1931) $0.69
Salt Flat 0.60
Darst Creek 0.60
Pettus, Bee County 0.95

(Posted by Magnolia Petroleum Co.)

Corsicana Heavy $0.45
Luling 0.45

(Posted by The Texas Co.)

Markham $0.50

NORTH LOUISIANA—ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana

Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton, De Soto, Sabine, Cotton Valley, Sarepta and Carterville.

Effective March 10, 1931

Below 29	$0.43	35-35.9	$0.57
29-29.9	0.45	36-36.9	0.59
30-30.9	0.47	37-37.9	0.61
31-31.9	0.49	38-38.9	0.63
32-32.9	0.51	39-39.9	0.65
33-33.9	0.53	40 and above	0.67
34-34.9	0.55		

Smackover, all grades $0.45
Bellevue 0.45
*Urania, La. (Oct. 30, 1930) 0.75
†East El Dorado (Calion) 0.45

*Posted by Louisiana Oil Refining Corp.
†Posted by Magnolia Petroleum Co.

March 10, 1931, The Texas Co. same schedule in Louisiana as Standard.

March 10, Magnolia met Standard schedule in Louisiana-Arkansas fields except it posts the same low grades in La.-Ark. as in Mid-Continent.

Stephens, Arkansas

Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

Effective March 10, 1931

Below 29	$0.38	29 and above	$0.41

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective Jan. 14, 1931

Grades A	$0.80	32-32.9	$0.85
Grades B:		33-33.9	0.87
Below 25	0.69	34-34.9	0.89
25-25.9	0.71	35-35.9	0.91
26-26.9	0.73	36-36.9	0.93
27-27.9	0.75	37-37.9	0.95
28-28.9	0.77	38-38.9	0.97
29-29.9	0.79	39-39.9	0.99
30-30.9	0.81	40 and above	1.01
31-31.9	0.83		

On Oct. 28, The Texas Co. posted same prices on Grades A and B Gulf Coast crude as Humble.

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling, Humble, Pierce Junction, Sugarland, Refugio county, and Raccoon Bend. All other fields are Grades A only.

Specifications for Grade "A" crude: Gravity; 25° and below, at 60° F; Viscosity: not less than 100 seconds at 100° F. Saybolt.
Sulfur: not over .4%.

Grade "B" includes all Coastal crude which does not meet the test for "A" grades.

Gasoline Prices Drop Over the World

WASHINGTON, April 17.—Retail prices of gasoline over the world were approximately 6 cents lower per gallon the last quarter of 1930 than the last quarter of 1929, according to the minerals division of the Bureau of Foreign and Domestic Commerce.

Retail prices were higher in Brazil, Chile, China, Costa Rica, Greece, India and Sweden.

The highest retail gasoline price at the end of 1930 was in Nairobi, Kenya, British East Africa, 69 cents per Imperial gallon. The lowest retail price was 14.5 cents, at Budapest, Hungary.

The highest retail price of kerosine was 75 cents per gallon at Puerto Cortes, Honduras. Gasoline there retailed for 38 cents per gallon.

The lowest kerosine price was 10.5 cents at Kovno, Lithuania.

N.P.A. Fire Marshalls To Meet

WASHINGTON, April 17.—The annual meeting of the Fire and Safety Marshals of the National Petroleum Association will be held at Warren, Pa., May 28, according to R. A. Wotowich, Cities Service Oil Co., trustee in charge of the department of fire and safety of the association.

A first aid contest among the various refinery teams will be held. Fire marshals are urged to keep up their weekly plant inspections and are told in a bulletin sent out by Mr. Wotowitch that members attending the meeting will want to know what has been done rather than what is planned for the coming year.

Becomes Republic Sales Manager

NEW YORK—William H. Wilson, who has represented for the past five years the Carson Petroleum Co., a subsidiary of the Cities Service Export Oil Co., has become sales manager at New York for the Republic Oil Co.

May 1 the Republic company will move to 21 West St., where it will engage in a general marketing business.

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Trucks

and trailers—their operation and maintenance—how they lower oil transportation costs and how to sell from the truck seat—30 articles have been devoted exclusively to truck operation in the oil industry in six months' issues of National Petroleum News. They are listed here for your file reference:

1931

Aluminum tankwagons experimented with in California — April 8, p. 81
One truck adds 11 more stations to route — March 25, p. 70
Railroads plan rate cut to meet truck competition — March 18, p. 41
Tells of motor hauling of oils — March 11, p. 92
High motor speeds may restore oil demand — March 4, p. 166
Selecting trucks to meet state laws and road conditions — March 4, p. 136
Cutting cost by increasing truck train capacities — March 4, p. 130
Jobber rents truck from driver — March 4, p. 125
Driver's name on truck helps keep it clean — Feb. 25, p. 106
6-wheel truck picks up too many nails — Feb. 25, p. 106
Two trucks deliver 175,000 gallons of gasoline each month — Feb. 25, p. 83
Cutting costs by re-using old truck tanks — Feb. 25, p. 74
Trucking motor oil saves one jobber $15,000 a year — Feb. 18, p. 87
Diesel engine more economical than gasoline engine — Feb. 18, p. 75
Railroad, truck and bus fight meets automotive counter attack — Feb. 11, p. 96
Battles waging between motor vehicles and railroads — Feb. 11, p. 31
Aluminum trailer carries 250 gallons more gasoline — Jan. 28, p. 68
Aluminum truck tanks profitable where weight limit is factor — Jan. 28, p. 25
Tank trucks need specially designed chassis — Jan. 21, p. 67
New high speed, heavy duty truck has two separate motors — Jan. 7, p. 36

1930

Foolproof equipment, good drivers, avoid truck accidents — Dec. 31, p. 57
Fuel oil trucks operated at small cost — Dec. 10, p. 81
General Motors survey shows delivery is big cost item to oil companies — Dec. 3, p. 73
Cost of lettering on trucks should be charged to advertising — Nov. 26, p. 67
Study of auto routes cuts truck delivery costs — Nov. 19, p. 68
Semi-trailers deliver more gasoline with fewer pieces; what one company has found — Nov. 12, p. 267
Operating costs; trucks cut bulk station duplications, stocks — Nov. 12, p. 260
Has world's largest tank truck — Nov. 12, p. 259
Tank truck of yesterday, today, tomorrow — Nov. 12, p. 253
Use of aluminum grows in transportation equipment — Nov. 12, p. 137

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National Petroleum News
Main Office: 1213 West Third St.
Cleveland, Ohio

Crude Oil Prices (in Effect April 20, 1931)

(Prices are per barrel at the well)

(Crude Oil Prices for the whole year in OIL PRICE HANDBOOK published annually)

ROCKY MOUNTAIN FIELDS
(Posted by Midwest Refining Co.)
(Salt Creek prices effective March 5, 1931)

Salt Creek, below 29°	$0.43
" " 29-29.9	0.45
" " 30-30.9	0.47
" " 31-31.9	0.49
" " 32-32.9	0.51
" " 33-33.9	0.53
" " 34-34.9	0.55
Salt Creek 35-35.9	0.57
" " 36-36.9	0.59
" " 37 and above	0.61

(Posted by Ohio Oil Co. and Midwest Refining Co.)

Elk Basin	$0.90
Grass Creek light	0.90
Big Muddy	0.65
Lance Creek	0.98
Rock Creek	0.66
Mule Creek	1.20
Rex Lake	1.10
Pondera	1.45
†Osage	0.50
†Cat Creek, Mont	0.90
Sunburst, Mont	1.55
†Hogback, N. Mex. (April 1, 1931)	0.90

†Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin. Others are prices of Ohio Oil Co.

CALIFORNIA CRUDE
†Standard Oil Co. of California
Effective March 31, 1931

Gravity	Signal Hill, Seal Beach, Alamitos Heights, Huntington Beach, Inglewood, Olinda-Brea Canon, Athens-Rosecrans-Dominguez, Torrance, Richfield, Whittier, LaHabra, Montebello, Coyote Hills and Santa Fe Springs	Elwood Terrace	Newhall, McKittrick, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills, Lost Hills, Coalinga and Wheeler Ridge	*Santa Paula	*Orcutt
14-19.9	$0.65	F.O.B. Ship	$0.55	$0.60	$0.55
20-20.9	.65		.53	.58	.53
21-21.9	.62		.51	.56	.51
22-22.9	.59		.49	.53	.49
23-23.9	.56		.47	.50	.47
24-24.9	.53		.45	.47	.45
25-25.9	.50		.43	.44	.43
26-26.9	.47		.41	.41	.41
27-27.9	.44		.39	.38	.39
28-28.9	.41		.37	.35	.37
29-29.9	.38		.35	...	.35
30-30.9	.35		...	...	...
31-31.9	.35		...	...	...
32-32.9	.35		...	...	...
33-33.9	.35		...	...	...
34 and above	.35	$0.35	...	...	...

*Posted by Union Oil Co. of California, effective March 30, 1931.

†Postings on Kettleman Hills crude discontinued by Standard, March 10, 1931; on Playa del Rey, March 31,1931.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders effective on the date shown.

Refiners' Supplies

	April 20	April 13
Soda Ash Light 58% bags,cwt.	$1.20-1.38	$1.20-1.38
Silicate of Soda 60 deg. drums, cwt.	$1.75-1.90	$1.75-1.90
Silicate of Soda 40 deg. tank cars, cwt.	$0.70	$0.70
Silicate of Soda 40 deg. drums, cwt.	$1.00	$1.00
Sal Soda wks.	$0.90-1.20	$0.90-1.20
Caustic Soda 76% solid..cwt.	$2.25-2.50	$2.25-2.50
Sulfuric Acid 60 deg. tank cars, f. o. b. shipping point per ton	$11.00-12.50	$11.00-12.50
Sulfur, flowers of.....cwt.	$3.10-4.00	$3.10-4.00
Liquid Chlorine, tank cars, wks.....lb.	1.75	1.75

Compounders' Supplies

	April 20	April 13
Vegetable Oils		
Linseed carloads, spot.....lb.	9.20	9.20
Tanks, spot	8.60	8.60
Soya Bean, Tank, coast...lb.	7.10	7.10
Oleic Acid		
Distilled, tanks.....lb.	7.50	7.50
Distilled, bbls.....lb.	8.75	8.375
Saponified, tanks.....lb.	7.75	7.75
Saponified, bbls.....lb.	8.625	8.625
Lard Oils		
Prime Winter Strained....lb.	13.00	13.00
Extra Winter Strained....lb.	9.75	9.75
Extra.....lb.	9.50	9.50
Extra No. 1.....lb.	9.00	9.00
No. 1.....lb.	8.75	8.75
No. 2.....lb.	8.50	8.50
Tallow oil.....lb.	8.25	8.25
Neatsfoot Oil		
Pure, bbls.....lb.	11.25	11.25
Extra, bbls.....lb.	9.25	9.25
No. 1 bbls.....lb.	9.00	9.00
Cold Pressed.....lb.	16.00	16.00
Fish Oils		
Menhaden Oil		
Light Pressed.....gal.	38–40	38–40
Light Pressed, tank cars, N. Y.....gal.	30–32	30–32
Yellow bleached.....gal.	42–44	42
Whale, extra winter bleached, ...gal.	80	80
Naval Stores		
Steam, distilled turpentine, N. Y.....gal.	51	50
Steam, distilled turpentine, Savannah.....gal.	49	48
Gum turpentine, N. Y....gal.	54-56	54-56
Gum turpentine, f. o. b. cars Savannah.....gal.	48-50	48-50
Wood Rosin, N. Y.....bbl.	$5.20	$5.30
Wood Rosin F, Savn'h....bbl.	$5.10	$5.20
Gum Rosin B, N. Y.....bbl.	$4.70	$4.80
Gum Rosin B, f. o. b. cars Savannah.....bbl.	$3.95	$4.05
Rosin oil, pure.....gal.	54	54
Rosin, oil, compounded...gal.	48	48
Pine Tar		
Kiln burnt.....bbl.	$10.00-11.00	$10.00-11.00
Retort.....bbl.	$11.50-12.50	$11.50-12.50
Alcohol		
Denatured Formula 5, in tanks, per gal.	24	24

Natural Gasoline Summary Out

WASHINGTON—A review of the natural gasoline industry in 1929, including statistics on production and stocks, pipeline transportation, blending, spot prices and a survey of plants, has been released by the U. S. Bureau of Mines, Department of Commerce.

The pamphlet is entitled "Natural Gasoline in 1929" and was compiled by G. R. Hopkins and E. M. Seeley. It is for sale by the Superintendent of Documents, Government Printing Office, Washington, for 5 cents.

The review also includes data on natural gasoline blending at plants and data on liquefied petroleum gas including sales.

NEW YORK—New York offices of the Pittsburgh-Des Moines Steel Co. have been moved to 270 Broadway, according to Robert Clarke, Jr., advertising manager. They were formerly at 50 Church St.

Howard W. Ford remains district sales manager at New York.

OIL STOCKS AND FINANCES

Prairie Oil & Gas Co. Elects Four Bankers as Directors

TULSA, April 18

WITH a majority of directors representing banking interests on the board of the Prairie Oil & Gas Co., as a result of the election April 14, the trade now looks for action at an early date toward the completion of rumored consolidations which, it is known, have been under way.

The banking group commonly referred to as Blair & Co. placed three of its representatives on the board. These are Elisha Walker, chairman, Transamerica Corp., New York; Hunter S. Marston, president, Blair & Co., New York, and John H. Markham, Jr., president, Petroleum Corp. of America, Tulsa. The latter company was formed about two years ago as an investment trust sponsored by the Blair interests and is the holder of large blocks of stock in the Prairie Oil & Gas Co. and the Prairie Pipe Line Co., bought from the Rockefeller interests.

The other banking institution representative is Halstead G. Freeman, president, Chase Securities Corp., New York.

The other members of the board, re-elected, are W. S. Fitzpatrick, chairman, Prairie Oil & Gas Co.; Nelson K. Moody, president, and Dana H. Kelsey, vice-president and general manager. This is the first time in the company's history, since dissolution of the Standard Oil Co. of New Jersey, that the Prairie board has had members other than its own executives.

The board, up to last Tuesday's meeting, was composed of five members. It now has seven. To provide places for the newcomers, H. C. Fitzpatrick and J. A. Hollihan retired. Mr. Fitzpatrick is assistant to the general manager and Mr. Hollihan is secretary. All officers were re-elected, these being Messrs. Fitzpatrick, Moody, Kelsey, Hollihan and A. B. Hookins, who is treasurer.

In a statement, the management said that about 75 per cent of the stock in the company was represented at the meeting and that "in view of the rapidly changing conditions in the industry and the affairs of the company, large groups of Eastern stockholders were present by proxy and asked for representation on the board of directors to enable these investors to be more actively interested in the company.

"The new directors are all important factors in the financial world and the representation of these groups of large stockholders on the board of directors is an assurance of their activity and assistance in rounding out plans to meet readjustments taking place in the oil business and the expansion heretofore announced as the Prairie's program looking to the continuance of the important position that the Prairie has so long held in the Mid-Continent field."

In a resolution introduced by James Pollard, of Los Angeles, the stockholders commended the management.

Probably because of the arrangement announced a week ago between the Sinclair Consolidated Oil Corp. and the Prairie Pipe Line Co., under which Sinclair will lay a pipeline from the East Texas fields to Mexia, Tex., there to connect with the Prairie system, the rumor of a Sinclair-Prairie merger was revived. So far as can be learned, the arrangement goes no farther than one whereby Sinclair will move oil to its refineries through Prairie lines, under joint tariff agreement.

While H. F. Sinclair has spent most of the past four months in the Mid-Continent and California, the only indication of his entering into the conduct of another company's affairs came April 13 when he was elected chairman of the board of the Rio Grande Oil Co.

It is known that the check of each other's properties made by the Prairie Oil & Gas Co. and the Tide Water-Associated Oil Co. has been completed and that the directors have recently been discussing terms of consolidation. It is expected that a decision will be reached soon.

Mid-Continent and Deep Rock Pass Dividends

CLEVELAND, April 18.—Mid-Continent Petroleum Corp. has omitted the dividend on its common stock and the Deep Rock Oil Corp. on its preferred stock.

Mid-Continent issued a statement that the company earned $1.56 a share on its operations last year but that inventory adjustments made necessary by cuts in crude oil prices and low prices for refined products, reduced the average net to 80 cents a share.

Since Jan. 1, it was pointed out, there had been another cut in crude oil prices forcing another inventory adjustment. Since Jan. 1 operations have not been on a profitable basis after charges have been made for depreciation and depletion, it was stated.

Mid-Continent pointed out that its current assets are 9 to 1 of current liabilities and net working capital after all inventory adjustments is approximately $9 a share of outstanding stock. Of this average $4 a share is cash. The company has no bank loans, funded debt or preferred stock, it was pointed out.

Deep Rock's action followed a fall in its 1930 earnings coupled with fear of directors that immediate recovery of the oil industry is not to be expected, was the substance of a statement it made in Chicago.

Barnsdall in again declaring a dividend of 25 cents a share reported its earnings were not on a part with last year's earnings but it was felt that stockholders were entitled to dividends because of the standard depletion and depreciation maintained by the company, of the fact that its half interest in the Elwood field in California had been carried on the books at only the actual investment in materials and plant installation, and because the officers expect a substantial gain in cash the first nine months of this year over dividend requirements.

S. O. Indiana Earnings Exceed $46,000,000

CHICAGO, April 18.—Preliminary statement of Standard Oil Co. of Indiana and subsidiaries shows net profits of $46,371,000 for 1930, or $2.73 a share on the 16,996,595 shares outstanding at the end of the year.

In 1929 the parent company netted $78,499,754, or $5.37 a share on an average number of shares outstanding during the year, and $4.66 a share on the number outstanding at the end of the year. The company did not issue a consolidated statement for 1929.

At its annual meeting May 7 the Indiana company's stockholders will be asked to vote on reorganization under the Indiana corporation laws of 1929. It is now chartered under the Indiana laws of 1889. Its charter will expire in 1939. No fundamental change is involved in the proposed reorganization, it is stated.

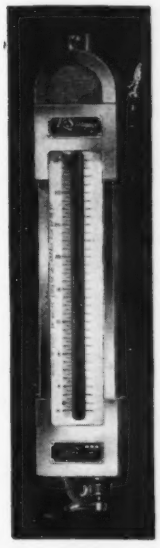
Stockholders will also vote to authorize 15 members on its board which now contains 11 members. It is not the intention to enlarge the board immediately, it was said.

EN-AR-CO
MOTOR OIL
WHITE ROSE
GASOLINE
WHITE ROSE
ETHYL
ROYAL
GASOLINE
EN-AR-CO
GEAR LUBRICANT

The National Refining Co.
Cleveland, Ohio

THE K-S TELEGAGE FOR LIQUID MEASUREMENT
ACCURATE - DEPENDABLE

NET PROFIT IS WHAT COUNTS



The Telegage will transform its cost into an economic profit in many ways: by saving the time of men who must measure liquids—by eliminating the risk of climbing tanks which accompanies the old fashioned stick or tape method—by preventing the loss of vapors due to open hatches for sticking—by preventing the risk of explosions and fires. Because of the Telegage there is never an open hatch except for filling.

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Transactions in Oil Shares on New York Stock Exchange

1929 High	1929 Low	1930 High	1930 Low	Listed Shares	Par Value	Company	Div. Rate	Last Paid	Transactions Week Ended April 18 Sales	First	High	Low	Last	Change‡
42⅝	17½	42¼	16½	922,075	N.P.	Amerada Corp	50cQ	Jan. 30, 31	3,200	19⅛	19½	18	18½	0
64¾	12½	37	5¼	209,180	N.P.	American Republics Corp	....	.....	1,200	7¾	8	7¼	8	+ ⅝
47¼	34½	51	30	2,240,000	$25	Associated Oil	50cQ	Mar. 31, 31	10	30	30	30	30	0
77⅞	30	51⅝	16⅝	2,683,868	25	Atlantic Refining Co	25cQ	Mar. 16, 31	23,400	18⅞	19¼	15¾	16½	— 2½
49½	20	34	8⅝	2,257,108	25	Barnsdall Corp. A	25cQ	Feb. 16, 31	18,800	11¼	11¼	9¾	10	— 1⅛
34½	25	35	21	2,060,966	25	California Petroleum Corp	....	Jan. 1, 29	.....	....	....	....	....	.....
32⅞	12½	20⅝	8¼	1,444,970	N.P.	Colonial Beacon Oil Co	....	.....	700	9	9	8¾	8¾	— ¼
37¾	18	30½	7⅝	4,610,258	N.P.	Continental Oil (Delaware)	.....	.....	26,100	9⅛	9⅛	8	8	— 1
94¾	42¼	71⅛	22⅝	410,857	$100	General Asphalt Co	75cQ	Mar. 16, 31	13,600	28⅞	30¼	24⅞	25¼	— 3⅝
109	26	116⅞	29¼	250,000	100	Houston Oil	....	.....	26,600	53	56⅛	45⅝	47½	— 7
..	..	10¼	6⅝	.....	..	Houston Oil, new	....	.....	17,100	12⅜	12¾	10½	10¾	— 1⅜
53	13⅛	28⅜	3	699,066	10	Indian Refining	....	Dec. 15, 20	2,100	3¼	3½	3	3⅛	— ⅛
51¼	11½	27⅜	3⅛	568,816	10	do certificates	....	.....	.....	....	....	....	....	.....
38⅛	16½	29½	21¼	3,994,150	N.P.	Lago Oil & Transport	....	Aug. 2, 27	.....	....	....	....	....	.....
18	7	12	3½	1,187,701	N.P.	Louisiana Oil Refining	.....	.....	2,700	4	4	3⅞	4	0
100¼	80	89½	60	40,000	$100	do pfd	$1.62½Q	Feb. 14, 31	70	....	40⅛	40	40	—11½
18½	5⅞	10⅜	1¾	330,000	N.P.	Maracaibo Oil Exploration	....	.....	500	2⅛	2⅛	2⅛	2⅛	0
295	176	182	150	459,428	$100	Mexican Petroleum	$3Q	Jan. 20, 31	.....	....	....	....	....	.....
105	102	100	100	120,000	100	do pfd	$2Q	Jan. 20, 31	.....	....	....	....	....	.....
69⅜	9¼	37	9¾	1,244,383	N.P.	Mexican Seaboard Oil	....	Oct. 15, 24	87,700	19⅞	20⅜	17¾	18⅞	— 1⅜
39⅞	22½	33	11	1,899,138	N.P.	Mid-Continent Petroleum	50cQ	Feb. 16, 31	6,600	11	11	10⅜	10¼	— ½
3⅜	¾	2½	¾	908,171	N.P.	Middle States Oil ctfs	.....	.....	.....	....	....	....	....	.....
..	..	32	16	6,708,086	N.P.	Ohio Oil Co	25cQ	Mar. 14, 31	19,700	13	13⅜	11½	12⅛	— ¾
69	40¼	64¼	42	1,000,000	$50	Pan American Petrol. & Trans	....	Oct. 20, 27	100	32	32	32	32	0
69¼	40½	67½	32	2,422,221	50	do B	....	Oct. 20, 27	1,200	32	32	32	32	0
15¼	3	12¾	1¾	199,370	N.P.	Panhandle Prod. & Refg	....	.....	100	2¾	2¾	2¾	2¾	+ ¼
76	47½	80	47½	25,666	$100	do pfd	....	July 2, 23	50	15½	20	15½	20	+ 2
..	..	27½	6	2,937,900	N.P.	Petroleum Corp. of America	37½cQ	Dec. 31, 30	4,000	8	8¼	7⅝	7⅞	— ¼
47	24¼	44¾	12	2,670,089	N.P.	Phillips Petroleum Co	50cQ	Jan. 2, 31	14,800	10⅛	10⅛	9	9⅛	— ⅞
3⅛	1	2½	⅛	1,184,917	$25	Pierce Oil Corp	....	.....	2,300	⅞	⅞	¾	⅞	0
51½	20	52	7½	150,000	100	do pfd	....	Feb. 1, 22	200	12	12	12	12	— 3
5⅞	½	7⅛	1⅜	2,500,000	N.P.	Pierce Petroleum Corp	10c	Feb. 16, 31	1,700	2⅜	2⅜	2¼	2¼	0
65⅛	40½	54	11¼	2,435,670	$25	Prairie Oil & Gas Co	50cQ	Mar. 31, 31	10,200	13⅞	14⅛	12⅜	12⅜	— 1
65	45	60	16⅝	4,050,000	25	Prairie Pipe Line Co	75cQ	Mar. 31, 31	18,300	22⅞	24	22	22½	+ ¼
25⅞	4	31	1	749,017	50	Producers & Refiners Corp	....	Sept. 15, 23	300	4	4	4	4	0
46¼	25½	38	11½	56,907	50	do pfd	....	May 4, 25	.....	....	....	....	....	.....
30¾	20	27¼	7⅝	3,038,370	25	Pure Oil Co	....	Sept. 1, 30	9,100	8⅛	8¼	7⅞	7⅞	— ⅜
116	108	114¼	90½	130,000	100	do 8% pfd	$2Q	Apr. 1, 31	90	88½	90	88¼	90	+ 1½
49⅜	22⅜	28¼	4¼	2,891,735	25	Richfield Oil (California)	....	Sept. 1, 30	6,800	2⅞	2⅞	2½	2½	— ⅜
42½	15	25¾	5	1,235,270	N.P.	Rio Grande Oil Co	....	July 25, 30	2,000	7¼	7¼	6½	6½	— ¾
64	43⅛	56½	37⅛	951,310	$13.40	Royal Dutch (N. Y. shares)	$1.3404	Jan. 31, 31	10,300	35¾	36¼	32⅜	33	— 3½
55¾	43⅜	48⅜	26	77,492	£2	Shell Trans. & Trading	96.6c	Jan. 23, 31	300	29	29	26½	26½	— 4½
31¾	19	25½	5⅞	13,069,076	N.P.	Shell Union Oil Corp	....	June 30, 30	12,170	7⅜	7⅜	6½	6⅝	— ⅝
..	..	106¼	62	400,000	100	do pfd	$1.37½Q	Apr. 1, 31	1,500	44½	44½	40	40	— 7
40⅛	15	37	5⅝	869,255	10	Simms Petroleum Co	....	Sept. 15, 30	200	7	7	7	7	— ½
45	21	32	9¾	5,455,665	N.P.	Sinclair Consolidated Oil Corp	25cQ	Jan. 15, 31	28,300	12½	12⅝	11¼	11½	— ⅜
111	103	112¼	86	154,685.	100	do pfd	$2Q	Feb. 14, 31	700	103	103	102½	102½	0
46⅜	42	42	10⅜	1,097,650	$25	Skelly Oil Co	50cQ	Dec. 15, 30	2,200	8¼	8¼	7¼	7¼	— 1
..	..	99¾	43	120,000	100	do pfd	$1.50Q	Feb. 1, 31	400	39½	39½	37	37	— 3
..	..	106	98	750,000	100	S. O. Export Corp. pfd	$2.50S.A.	Dec. 31, 30	1,200	105¼	105¼	104¼	104¼	— ½
81⅜	51⅜	75	42¼	13,016,434	N.P.	S. O. California	62½cQ	Mar. 16, 31	17,400	43¾	43⅞	42¼	42½	— 1⅜
..	..	49	14⅜	320,000	$25	S. O. Kansas	25cQ	Mar. 16, 31	2,700	15	15¾	13¾	13¾	— 1⅜
83	48	84⅞	43½	25,443,643	25	S. O. New Jersey	‡25cQ	Mar. 16, 31	60,900	43⅛	43¾	40¾	41⅛	— 2⅛
48⅜	31¾	40⅜	19¾	17,809,530	25	S. O. New York	40cQ	Mar. 16, 31	28,550	22	22	20½	20¾	— 1¼
86⅞	55	70	39	1,416,911	N.P.	Sun Oil Co	25cQ	Mar. 16, 31	300	41½	41½	41½	41½	+ ½
105½	100	107¾	97¾	100,000	$100	do pfd	$1.50Q	Mar. 2, 31	380	103	103¾	102½	102½	— 1¼
24	5¼	9⅜	¾	1,026,979	N.P.	Superior Oil Corp	....	.....	300	1⅛	1⅛	1	1	— ¼
71⅞	50	60½	28¼	9,850,724	$25	The Texas Corp	75cQ	Apr. 1, 31	42,000	28⅛	28¾	26⅜	27	— 1½
23⅞	9½	14½	4	929,947	10	Texas Pacific Coal & Oil	....	Dec. 31, 29	1,800	4½	4½	4½	4½	— ⅛
23½	10	17¾	5⅞	5,881,980	N.P.	Tide Water Associated Oil	30cS.A.	Feb. 16, 31	11,700	6⅞	6⅞	6	6	— ¾
90⅞	74⅜	89¾	56	732,550	$100	do pfd	$1.50Q	Jan. 2, 31	1,300	58	58½	57	57	— 1½
40	14	31	13	2,191,820	N.P.	Tide Water Oil Co	20cQ	Dec. 31, 30	.....	....	....	....	....	.....
97½	85⅛	94⅞	71	199,443	$100	do pfd	$1.25Q	Feb. 16, 31	.....	....	....	....	....	.....
..	..	24	12⅜	3,339,150	N.P.	Transcontinental Oil	....	May 1, 30	.....	....	....	....	....	.....
57	42⅜	50	20¾	2,201,008	$25	Union Oil Co. (California)	50cQ	Feb. 10, 31	6,600	21¼	21⅜	19⅞	20⅜	— ⅛
..	..	38½	23	1,254,048	N.P.	Union Tank Car Co	40cQ	Mar. 2, 31	.....	....	....	....	....	.....
42⅞	15	27	4⅛	777,603	N.P.	Warner Quinlan Co	....	July 3, 30	900	4½	4½	4¼	4¼	— ¼
38	25	29½	26	490,000	N.P.	White Eagle Oil & Refg	....	Apr. 20, 30	.....	....	....	....	....	.....
29¾	12⅞	21	6½	428,967	N.P.	Wilcox Oil & Gas Co	....	May 10, 28	2,200	8½	9	7⅜	7⅜	— 1½

•New high †New low ‡Also extra s-Stock §From close of preceding week. Total sales 555,620

Pittsburgh Curb Market

Transactions Week Ended April 17, 1931

	Sales	High	Low	Last	Change
Ark. Nat. Gas A..	30	5½	5½	5½	....

Pittsburgh Stock Exchange

Transactions Week Ended April 11, 1931

	Sales	High	Low	Last	Change Over Week
Ark. Nat. Gas....	50	5½	5½	5½	0
Cons. Gas pfd....	12	25	25	25	— ½
Devonian Oil....	345	8	7	7	—1
Lone Star Gas....	8,068	19¾	†17½	17½	—2¼
do pfd.....	150	108	104½	104½	—2½
Pet. Exploration..	100	15	†15	15	—10
Phoenix Oil.....	500	.15	.15	.15	0
Plymouth Oil....	1,485	12	10	10	—2
Shamrock O. & G.	1,300	9½	7¾	9	— ½
West. Pub. Serv...	6,208	10¾	†8⅞	8⅞	—1⅜

†New low.

Oil Company Earnings

Year	1930	1929
Chesebrough Mfg. Co.....	$1,415,877	$1,586,597
Cities Service Co.....	48,975,755	36,477,184
Deep Rock Oil Corp.....	350,000	1,365,437
General Asphalt Co.....	1,006,795	1,757,095
Indian Refining Co.....	*3,035,886	1,025,101
Mex. Seaboard Oil Corp....	605,873	*28,850
Mid-Cont. Pet. Corp.....	†1,493,056	7,683,378
Mountain & Gulf Oil Co...	‡234,053	577,206
New Bradford Oil Co.....	‡651,803	.....
Panhandle Prod. & Ref. Co.	*449,401	151,619
Ryan Cons. Oil Co.....	‡229,708	‡377,646
Salt Creek Cons. Oil Co....	564,784	611,893
Shreveport-El Dorado Pipe Line Co.....	*768,205	68,114
Skelly Oil Co.....	1,916,871	5,786,490
Solar Refining Co.....	*291,031	*223,063
South Penn Oil Co.....	1,378,072	5,139,296
Standard Oil Co., Ohio....	3,724,325	4,202,384
Texon Oil & Land Co.....	‡2,175,799	.....
H. F. Wilcox Oil & Gas Co..	†602,796	†518,928

*Loss. †Before federal income taxes. ‡Before depreciation, depletion, etc.

Financial Notes

Simms Petroleum Co.—Alfred J. Williams, vice president, elected director. Board increased from 11 to 12 members.

Colonial Beacon Oil Co.—W. L. Stephens and George F. Rand retired as directors when board is reduced from 11 to nine members. Other directors re-elected.

Vacuum Oil Co.—Holt S. McKinney has been appointed treasurer. All directors re-elected at annual meeting.

Solar Refining Co.—All directors and officers re-elected at annual meeting.

H. F. Wilcox Oil & Gas Co.—All directors re-elected at annual meeting.

Barnsdall Corp.—R. A. Broomfield, president of Barnsdall Oil Co. of California, has been elected executive vice president of the parent company. Other Barnsdall Corp. officers have been re-elected.

N. P. N. Service Record

Some of the requests for information, data and advice, which were taken care of in various National Petroleum News offices in the past week are:

Sales manager of Tennessee oil marketer told where he may purchase iron carbonyl.

* * *

Advertising manager of Wisconsin oil jobber furnished information on coupon rackets promoted in some cities.

* * *

Student at Chicago university furnished references to N.P.N. articles on merchandising side lines at oil company stations and on vending devices.

* * *

New York inquirer told where he may obtain a non-technical discussion on tests of gasolines and motor oils.

* * *

Louisiana oil distributor told in two-page letter difference between distillate and kerosine, told something of specifications for distillate and what it is, whether an average distillate would burn in an oil lamp for a period of time without smoking, and whether it can be used in heaters having a wick.

* * *

New York motor oil compounder told how and whether it would be possible to obtain the type of high-grade motor oil he specifies by using a pure eastern neutral oil and bright stock.

* * *

President of Massachusetts oil jobber referred to books and bulletins which discuss gasoline in a practical and non-technical manner; to books on the function and application of lubricants generally helpful to a jobber and marketer of petroleum products.

* * *

Research department of large Ohio rubber company furnished figures on gasoline consumption by passenger cars, trucks and tractors in rural areas and small towns, and figures on gasoline tax refunds in agricultural states for gasoline not used in motor vehicles.

* * *

Treasurer of Massachusetts oil jobber furnished names and addresses of California and Gulf Coast Independent refiners who ship gasoline in tanker lots.

* * *

President of Quebec oil jobbing company furnished names and addresses of refiners of Pennsylvania bright stock who sell on the open market.

* * *

Massachusetts inquirer seeking to sell drum lots of Pennsylvania motor oil properly labeled and sealed, furnished names and addresses of such refiners.

* * *

New York inquirer furnished names and addresses of Pennsylvania refiners who could sell him gasoline in tank car lots.

* * *

Other oil jobbers to whom information was given as to complete data on reclaiming used crankcase oil and names of manufacturers making devices for this work included one in Massachusetts, North Dakota, Georgia, New York and Minnesota.

THE OIL INDUSTRY EXCHANGE

Positions Wanted

REFINERY SUPERINTENDENT — Twenty years operation and construction, of lubricating, skimming, asphalt, cracking plants. Desires new connection. Will accept foreign service. Address Box 674.

SALES EXECUTIVE desires permanent connection with opportunity for advancement with refiner or distributor. Twenty years experience in refining, lubricating engineering and sales management. Aggressive. Always produced results. Eastern location preferred. Address Box 683.

ACCOUNTING EXECUTIVE: Experienced in every line of the oil business from office boy, on up; try him out, best references. Address Box 699.

LUBRICATING OIL AND SALES ENGINEER would consider change. Now employed as lubricating engineer, in charge of sales with major oil company. Best reference. Address Box 702.

Situations Open

REPRESENTATIVES WANTED

calling on Oil Companies to handle our line consisting of cloth banners, fibre signs, lubricating charts and both in and outdoor advertising. Attractive commission basis. Write giving full details present and past connections. Address Box 700.

SALESMAN WANTED

One familiar with tank car gasoline trade in Eastern Ohio and Western New York. In reply give full details regarding age, experience, references and salary expected.

Address Box 697

Patent Attorneys

ROYAL E. BURNHAM
Attorney-At-Law
Patent and Trade-Mark Practice Exclusively
Continental Trust Building
Washington, D. C.

Miscellaneous

WHAT IT COSTS

"For Sale," "Wanted to Buy," "Help Wanted," "Business Opportunities."

"Miscellaneous" classifications, set in type this size without border—10 cents a word. Minimum charge, $3.00.

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Advertisements set in special type or with border—$4.00 per column inch.

Copy must reach us not later than Friday preceding date of issue.

All advertisements carried on this page are payable in advance.

For Sale

TANKS: 2—282,000 gallon, 40 ft. dia. 30 ft. high with roofs, match-mark, ready load. Condition excellent. Low price to avoid rehandling. 200-265 cu. ft. capacity approximately 2000 gallon tanks, 50" dia. 21' long. Tested to 300 pounds. Practically new. Well located. Low price. Tanks Specialists. ZELNICKER in St. Louis.

Deep water terminal. Rail facilities, Tiverton, Rhode Island. Permit for 1,250,000 barrels. 87,500 barrels erected. May be bought reasonably. Can also arrange for barging and barge terminal with rail facilities in Boston, Mass. Excellent opportunity for anybody interested in petroleum distribution in New England.

Liberty Oil Company, Boston, Mass.

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PARTNER WANTED

Want to meet a man capable of investing a little capital, either cash, stock or bond and take active part in a good going independent oil company with two Bulk Plants and sixty-five distributing stations. New England State.

Address, Box 701

INCREASE YOUR SALES

Well established and experienced New York sales organization with domestic and export outlets for petroleum lubricants and specialties desires connection with refiner or manufacturer.

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care National Petroleum News
342 Madison Ave., New York City

WILL SELL—TRADE—OR MERGE

Thoroughly equipped money making retail jobbing business doing an annual volume of over ten million gallons of gasoline, fuel oil and other petroleum products—through its own outlets. Located in one of the largest cities in the country.

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MAKE THIS OFFICE TULSA HEADQUARTERS

Will buy petroleum products for your account Small commission.

Wire or Write for Details

DALE W. MOORE

405 Philtower Bldg., Tulsa, Okla. Telephones: 3-4177 and 3-4178. L. D. 136

Standard Oil Stocks on New York Curb

1929 High	1929 Low	1930 High	1930 Low	Outstanding Shares	Par Value	Companies	Div. Rate	Last Paid	Transactions Week Ended April 18 Sales	First	High	Low	Last	Change§
18¾	13½	18½	12¼	.....	£1	Anglo-Amer. Oil voting stk. ctfs..	.....	June 5, 29	.....	.....	.....	.....	.....	.....
17⅛	11	19	12	.....	£1	do non-voting stk. ctfs.....	.....	June 5, 29	.....	.....	.....	.....	.....	.....
2½	¾	1	⅜	500,000	N.P.	Atlantic Lobos Oil.....	.....	.....	500	⅜	⅜	⅜	⅜	— ⅛
4½	1	1½	⅜	200,000	$50	do pfd.....	.....	.....	100	2	2	2	2	— ½
46½	25	25	11¼	40,000	25	Borne Scrymser Co.....	$1S.A.	Oct. 15, 30	200	7⅞	7⅞	7⅞	7⅞	— ⅛
74¼	55	69	39⅞	200,000	50	Buckeye Pipe Line Co.....	$1Q	Mar. 14, 31	800	50	50	49	50	+ ⅛
210	130	184⅞	100¼	120,000	25	Chesebrough Mfg. Co.....	‡$1Q	Mar. 31, 31	100	122½	122½	122½	122½	+ 3
11⅜	5⅜	7⅜	3	.....	N.P.	Creole Petroleum Co.....	.....	.....	9,800	2½	2¾	2⅜	2⅜	— ⅛
75¾	40	65¾	20¼	30,000	$50	Cumberland Pipe Line Co.....	50cQ	Mar. 16, 31	.....	.....	.....	.....	.....	.....
70½	42	54⅜	26	50,000	100	Eureka Pipe Line Co.....	$1Q	Feb. 2, 31	200	28⅞	31	28⅞	31	+ 4⅞
...	...	6¾	2½	280,000	N.P.	Galena Oil Corp. w.i.....	.....	.....	.....	.....	.....	.....	.....	.....
...	...	37¼	23½	.....	N.P.	General Petroleum Corp. w.i.....	.....	.....	3,600	21½	21½	21½	21½	0
128	74½	119	57¼	2,974,645	$25	Humble Oil & Refg. Co.....	‡50cQ	Jan. 1, 31	7,300	55½	55½	54⅛	54⅛	— ⅝
41	22	30	15	26,490,741	N.P.	Imperial Oil, Ltd.....	12½cQ	Mar. 2, 31	9,800	14⅞	15⅛	13½	13¾	— 1¼
42¼	26	41	14½	300,000	$10	Indiana Pipe Line Co.....	50cQ	Feb. 14, 31	300	16½	16½	16	16	— ⅛
29⅜	15	24	11⅜	14,247,880	N.P.	International Petroleum Co.....	25c	Dec. 15, 30	18,900	12¼	12¼	11⅞	11⅞	— ⅛
25⅞	10½	22⅜	11½	509,000	$12½	National Transit Co.....	25cQ	Mar. 16, 31	400	15	15¼	14¾	14¾	— ¼
17¾	10	21	10¼	100,000	10	New York Transit Co.....	40cQ	Jan. 15, 31	400	10½	11	10⅛	10⅛	— ⅞
63	41	54	26¼	40,000	50	Northern Pipe Line Co.....	$2S.A.	Jan. 2, 31	.....	.....	.....	.....	.....	.....
105½	103¾	108	100⅜	600,000	100	Ohio Oil pfd.....	$1.50Q	Mar. 14, 31	.....	.....	.....	.....	.....	.....
44⅛	18⅜	32	12	400,000	25	Penn Mex. Fuel Co.....	$1	Dec. 15, 30	100	12	12	12	12	— 1½
50	29	33	4⅞	160,000	25	Solar Refining Co.....	.....	Dec. 20, 29	1,000	6	7	5⅜	5⅜	— ¾
23⅛	13	20⅛	6¾	100,000	10	Southern Pipe Line Co.....	50c	Mar. 12, 31	600	15	17	15	15½	+ 1⅜
60¼	35⅜	45⅞	18	1,200,000	25	South Penn Oil Co.....	25cQ	Mar. 31, 31	2,100	18	18⅛	17	17	0
70	45	64	32	35,000	50	Southwest Pa. Pipe Lines.....	$1Q	Apr. 1, 31	350	38	38	34¾	35	+ 1½
63	45	59⅞	30	16,850,587	25	S. O. Indiana.....	50cQ	Mar. 16, 31	36,400	31	31⅛	30	30	— 1⅛
46⅞	29	40½	18⅞	2,577,124	10	S. O. Kentucky.....	40cQ	Mar. 31, 31	8,600	20⅞	21⅛	19⅝	19⅝	— 1⅜
50¼	40	48⅞	34	188,159	25	S. O. Nebraska.....	50cQ	Mar. 20, 31	.....	.....	.....	.....	.....	.....
129	60	108½	43¾	560,000	25	S. O. Ohio.....	62½cQ	Apr. 1, 31	150	52¼	52¼	52¼	52¼	— 3¼
...	...	...	...	120,000	100	do 5% pfd.....	$1.25Q	Jan. 15, 31	100	105	105½	105	105½	+ ¼
124½	113½	122	115¼	70,000	100	do 7% pfd.....	$1.75Q	Dec. 1, 30	.....	.....	.....	.....	.....	.....
18	5⅜	10	4	34,158	25	Swan Finch Oil Corp.....	....	Jan. 15, 29	.....	.....	.....	.....	.....	.....
133¾	75½	97⅞	45⅜	5,139,887	25	Vacuum Oil Co.....	$1Q	Mar. 20, 31	8,500	55¼	55¼	49	49⅞	— 5¼

*New high †New low ‡Also extra §From close of preceding week.

Independent Oils on New York Curb

1929 High	1929 Low	1930 High	1930 Low	Par Value	Companies	Transactions Week Ended April 18 Sales	First	High	Low	Last	Change§
.72	⅛	⅜	⅛	$1	Amer. Contr. Oilfields	.....	.....	.....	.....	.....	.....
8¾	1⅛	4½	⅞	5	Amer. Maracaibo.....	7,200	1¼	1¼	⅞	⅞	— ⅜
4¾	1	1¾	1⅛	10	Argo Oil.....	.....	.....	.....	.....	.....	.....
26	3¾	16¾	4⅝	N.P.	Arkansas Nat. Gas...	2,700	5⅜	5⅜	4⅞	5	— ⅜
24¾	6½	16⅝	4¾	N.P.	do Class A.....	18,300	5½	5⅝	4⅞	5¼	— ⅜
9	4	8⅛	6¼	10	do pfd.....	200	6¾	6¾	6½	6½	0
70	50	28½	13½	N.P.	British American Oil..	300	11¾	11¾	10	10¾	— 2½
4⅞	⅞	2¾	⅝	¼	Carib Syndicate.....	11,700	1¼	1½	1	1	— ½
68½	20	44¼	13⅛	N.P.	Cities Service.....	80,900	18	18¼	16¾	17	— 1
99¼	84	93⅞	52	100	do pfd.....	1,900	83⅝	84½	83½	83½	— ¼
9¼	8	9	7¼	10	do pref. B.....	.....	.....	.....	.....	.....	.....
96	81	89⅞	80	100	do pref. BB.....	100	82	82	82	82	+ 1½
1½	¼	⅛	⅛	1	Colombia Syndicate..	5,900	¼	¼	¼	¼	0
15	3⅞	8¼	1⅜	N.P.	Colon Oil Corp.....	500	2¼	2¼	2	2	— ½
...	...	21	3⅝	N.P.	Columbia Oil & Gas..	1,900	4½	4⅝	3⅞	3⅞	— ⅝
11¾	2½	5⅞	2	10	Consolidated Royalty	.....	.....	.....	.....	.....	.....
135	42	74¾	1⅛	N.P.	Cosden Oil Co.....	6,200	1⅝	1¾	1	1	— ½
87	55	70	10¼	100	do pfd.....	.....	.....	.....	.....	.....	.....
2½	¼	1	¼	N.P.	Crown Central Pet...	.....	.....	.....	.....	.....	.....
11½	4	..	..	N.P.	Crystal Oil.....	.....	.....	.....	.....	.....	.....
51¾	51¾	..	..	100	do pfd.....	.....	.....	.....	.....	.....	.....
26	6½	13½	4¼	N.P.	Darby Petroleum.....	100	3½	3½	3½	3½	0
..	..	21¾	21½	N.P.	do new.....	.....	.....	.....	.....	.....	.....
11	2	11	2	N.P.	Derby Oil & Refg.....	300	3½	3⅝	3½	3⅝	— ⅜
44	17	60	30	N.P.	do pfd.....	.....	.....	.....	.....	.....	.....
..	..	12	12	10	Devonian Oil.....	.....	.....	.....	.....	.....	.....
209	115	166⅞	58⅜	$25	Gulf Oil Corp.....	3,800	62	63⅛	58	58	— 5½
7½	1⅜	4	2¼	N.P.	Homaokla Oil.....	.....	.....	.....	.....	.....	.....
..	..	47½	12¾	N.P.	Indian Territory A....	1,400	15¼	15¼	14	14	— 1⅜
..	..	53½	12⅝	N.P.	do B.....	700	....	14¼	13¾	14	— 1¾
2⅞	⅝	1¾	⅝	10	Intercontinental Pet..	12,900	⅛	⅛	½	⅛	0
3⅝	1¼	3	⅞	N.P.	Kirby Petroleum.....	200	⅛	⅛	⅞	⅛	— ⅛
6½	1	4¾	½	N.P.	Leonard Oil & Dev...	1,000	¾	1	¾	¾	0
38⅞	18	29	5	N.P.	Lion Oil Refg.....	100	5½	5½	5½	5½	— ⅛
67⅞	28	55⅞	19⅜	N.P.	Lone Star Gas.....	3,800	19½	19½	17½	18⅞	— ¾
..	..	31	5½	$25	MacMillan Petrol.....	.....	.....	.....	.....	.....	.....
2⅞	¼	½	⅛	1	Magdalena Synd.....	42,400	½	½	⅜	1⅛	— 1⅛
38¼	14	16	3	N.P.	Margay Oil.....	400	5	5	5	5	0
6⅜	2¼	7½	1⅜	N.P.	Mexico Ohio Oil.....	100	3¼	3¼	3¼	3¼	— ⅛
..	..	11⅞	2¼	N.P.	Middle States A v.t.c.	300	3½	3½	3¼	3¼	— ½
..	..	6	¾	N.P.	do Class B v.t.c.	1,200	1	1	1	1	0
42	8	36¼	5	5	Missouri-Kansas P.L.	7,800	7½	7½	6⅛	6¼	— 1¼
1½	¼	¾	⅜	1	Mountain & Gulf Oil..	.....	.....	.....	.....	.....	.....
22⅞	7	12⅛	4½	10	Mountain Producers..	1,400	4⅜	4⅜	4⅛	4⅛	— ¼
43¾	24	41⅜	19⅞	N.P.	Nat. Fuel Gas.....	5,200	23¼	23¼	22⅛	22⅛	— 1⅛
5	2¼	3½	1⅜	$5	New Bradford Oil....	500	1¼	1⅜	1¼	1¼	0
4¾	3⅜	3⅜	2⅛	10	New England Fuel...	100	2	2	2	2	— ⅛
24½	11⅜	16⅞	4	25	N. Y. Pet. Royalty...	.....	.....	.....	.....	.....	.....
18½	6⅜	11¼	2⅛	N.P.	North Central Texas	.....	.....	.....	.....	.....	.....
19¼	8⅜	11⅝	3⅞	N.P.	Oilstocks Ltd. A.....	900	3½	3½	3½	3½	+ ½
18¼	8½	11½	4¾	N.P.	do B.....	.....	.....	.....	.....	.....	.....
26⅝	12⅜	19½	6½	N.P.	Pacific Western Oil...	2,800	9½	9½	8¾	9	+ ¼
3½	½	2½	¼	N.P.	Pandem Oil.....	6,500	⅜	⅜	⅛	⅜	0
10½	2¼	4¾	1	N.P.	Pantepec Oil.....	200	1¼	1¼	1¼	1¼	0
25½	13½	15	13½	$25	Paragon Refg. B. ctfs.	.....	.....	.....	.....	.....	.....
28	17	29	19⅛	N.P.	Petroleum Corp.....	.....	.....	.....	.....	.....	.....
..	..	5⅞	½	....	do warrants.....	200	⅞	⅞	⅞	⅞	0
37	22	27½	16¼	N.P.	Plymouth Oil.....	1,500	12	12	9⅞	10	— 2
16	9	10½	3	$5	Red Bank Oil.....	.....	.....	.....	.....	.....	.....
8½	1⅜	5⅜	1	N.P.	Reiter-Foster Oil.....	.....	.....	.....	.....	.....	.....
25¼	19	23½	7	25	Richfield Oil pfd.....	800	3⅞	3⅞	3⅜	3⅜	— ½
29	13	25	2¼	N.P.	Root Refining pr. pfd.	.....	.....	.....	.....	.....	.....
11	3	8⅝	2	N.P.	Ryan Consolidated...	.....	.....	.....	.....	.....	.....
5⅞	1⅜	2½	½	10	Salt Creek Consol.....	.....	.....	.....	.....	.....	.....
25⅞	9	15¼	5¼	10	Salt Creek Producers.	1,700	6¾	6¾	5¾	6	— ¾
33⅛	10	8	1¾	25	Shreveport El Dorado	.....	.....	.....	.....	.....	.....
..	..	39⅛	39	25	Signal Oil & Gas A...	.....	.....	.....	.....	.....	.....
24	9	17	6	N.P.	Southland Royalty...	2,100	4⅝	4⅞	4½	4⅝	0
12	4	10	2	5	Sunray Oil.....	6,400	3⅜	3⅜	3	3¼	— ⅛
23	7½	19½	8	N.P.	Texon Oil & Land....	500	9¾	10	9⅝	9⅝	— ⅛
81⅜	8⅞	16	8	10	Venezuela Mexico.....	.....	.....	.....	.....	.....	.....
6½	1⅜	4½	¾	5	Venezuela Petroleum.	200	1	1	1	1	+ ⅛
9½	2	5	2	1	Woodley Petroleum...	200	3½	3½	3	3	0
5⅜	¼	2½	⅜	N.P.	Y Oil & Gas.....	500	⅜	⅜	⅜	⅜	— ⅛

*New High †New Low §From close of preceding week.

New York Bonds

Week Ending April 17

	High	Low	Last	Change§
Asso. Oil gold 6s.....	103⅝	103⅝	103⅝	+ ⅜
Atlantic Refg. deb. 5s...	103	102	102	— ¾
Cal. Pet. 5s.....	92½	92	92	—1
Cal. Pet. 5½s.....	93⅞	93	93	—1½
General Pet. 5s.....	102½	102½	102½	0
Humble Oil & Refg. 5s..	102¼	102¼	102¼	0
Humble Oil & Refg. 5½s.	102½	102¼	102¼	— ⅛
Pan Amer. P & T 6s.....	102½	101½	101⅝	— ⅞
Pan Amer. P & T 6s.....	62¼	54¾	54¾	—7¾
Phillips Pet. 5½s.....	76	74	74	0
Pierce Oil deb. 8s.....	103	103	103	0
Pure Oil 5½s.....	90½	87½	88	—2
Pure Oil 5½s.....	85¼	82½	84	+1
Richfield Oil of Calif. 6s..	53⅝	49⅞	49⅞	—3⅞
Shell Union Oil 5s.....	72¼	70⅝	71	—1¼
Shell Union Oil 5s with war.	74¼	73	73	— ½
Sinclair Con. Oil 7s.....	98½	97½	97½	—1
Sinclair Con. Oil 6½s....	95	94¼	94¼	— ¾
Sinclair Con. Crude 5½s.	102¼	101¾	101¾	— ⅜
Sinclair Pipeline 5s.....	100⅛	99¾	100⅛	+ ⅜
Skelly Oil 5½s.....	72	72	72	— ½
S. O. N. J. 5s.....	103¾	103	103¼	— ¼
S. O. N. Y. 4½s.....	99	97¾	98	— ½
Union Oil of Calif. 6s A..	105½	105	105	— ½
Union Oil of Calif. 5s C..	100⅜	100	100	— ½
Union Oil of Calif. 5s war.	95	93¾	93¾	—1¼
Warner-Quinlan 6s.....	53½	53	53	— ¼
White Eagle Oil 5½s....	102¼	102¼	102¼	0

New York Curb Bonds

Week Ending April 17

	High	Low	Last	Change§
Cities Serv. 5s '66.....	72¾	71¾	71¾	—1¼
Cities Serv. 5s '50.....	78¾	76⅞	77⅛	—1⅜
Cities Serv. G. 5½s '42..	76½	75¾	75¾	—1
Cities Serv. G. P. 6s '43..	86	85¼	85½	0
Cont. Oil 5¼s '37.....	93	92⅞	93	0
Empire O & R 5½s '42..	74	73⅛	73⅛	— ⅞
Gulf Oil 5s '37.....	102½	102	102	— ½
Gulf Oil 5s '47.....	102	101½	101½	— ½
Indep. Oil 6s '39.....	85	84	84	—2
Sun Oil 5½s '39.....	101⅞	101½	101½	+ ⅛

Oil Dividends

	Amount	Payable	Stock of Record
Amerada Corp. q.....	50c	Apr. 30	Apr. 14
Barnsdall A & B q.....	25c	May 11	Apr. 14
Cities Service m.....	2½c	June 1	May 15
do stock m.....	½%	June 1	May 15
do pfd. m.....	50c	June 1	May 15
do pref. BB m.....	50c	June 1	May 15
do pref. B m.....	5c	June 1	May 15
Eureka Pipe Line q.....	$1	May 1	Apr. 15
Oil Shares pfd. q.....	75c	Apr. 16	Apr. 16
Union Oil q.....	50c	May 9	Apr. 17